

# BIENNIAL REPORT Florida Game and Fresh Water Fish Commission

### Biennial Report

of the

## FLORIDA GAME AND FRESH WATER FISH COMMISSION

For The Period Ending December 31, 1952

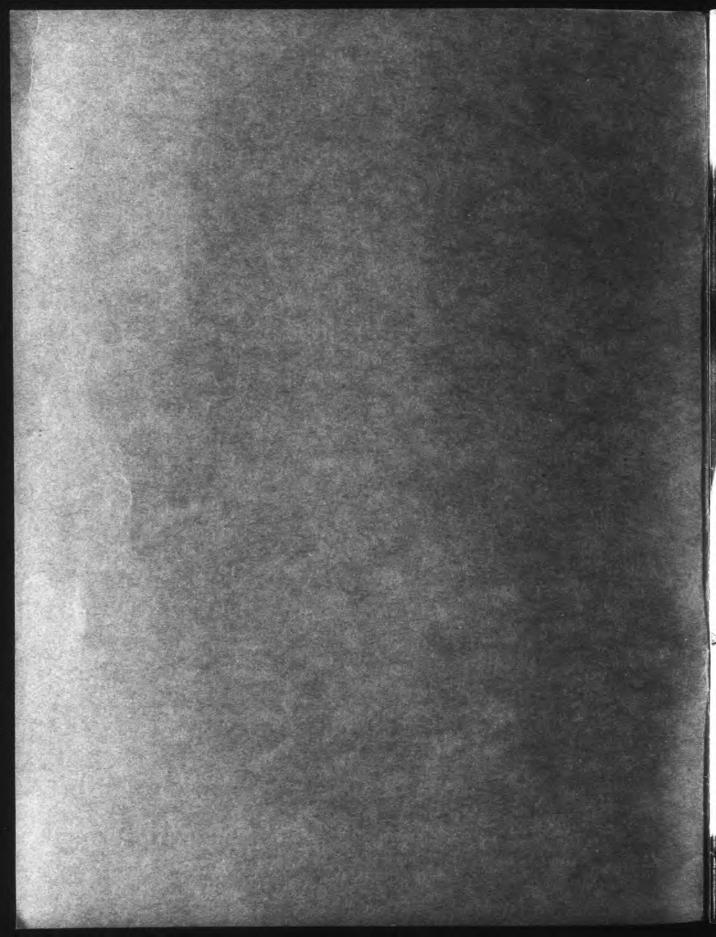


MILLER V. JOINER
Jacksonville

WALTER WARREN Leesburg CECIL M. WEBB, Chairman Tampa

BEN L. McLAUCHLIN, Director Fairfield A. F. RICH Tallahassee

LEO J. ADEEB Miami Beach





Calling the end to a perfect day's hunt.

### Game and Fresh Water Fish Commission



December 31, 1952.

HONORABLE FULLER WARREN Governor of Florida State Capitol Tallahassee, Florida

Dear Governor Warren:

Herewith is submitted the Biennial Report of the Florida Game and Fresh Water Fish Commission for the period ending December 31, 1952.

Through this report we wish to make known to you, the Members of the State Legislature and the people of Florida, the activities and achievements of the Commission. We realize that the contribution we have made is but a small part of the work which must be done before Florida attains the full realization of its fish and game potentialities. We feel confident that the progress made in the past biennium will be multiplied many-fold in the years to come.

Finally we wish to express our appreciation to the many State officials and private citizens whose vision and cooperation have assisted so greatly in our conservation endeavor.

Respectfully submitted,

CECIL M. WEBB, Chairman

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CMW: ej



Report

of

Progress

By BEN McLAUCHLIN

During the period of years between 1948 and 1952, particularly the last Biennium, the Game and Fresh Water Fish Commission made definite progress in all phases of conservation work. In general the Commission devoted its time to a continued expansion of activities and a streamlining of its methods of procedure.

This four year period was the first one in which the Game Commission can say that it was wholly in operation for a real term of office, since it was only a fledgling organization at its beginning in 1943 and really needed a few years in which to find its wings. The first few years were spent in getting prepared to accomplish the uneasy task of conservation, whereas the last two years were spent in actually accomplishing a part of this program of conservation, protection and restoration of the game and fish resources of Florida.

Purchase of quarters for the Tallahassee office of the Commission and eventual decentralization into five division offices, one located in each conservation district, were probably two of the more outstanding improvements of this period, although there are many others that can and should be added to this list. All added to a greater increase of efficiency.

In Game and Fish Management, this period was marked by continued progress in the acquisition of lands for public hunting areas, the inauguration of water hyacinth control program, investigations and surveys on various projects such as farm fish ponds, deer and turkey restoration programs, roughfish control, but perhaps most important of all was the employment of men trained in the science of wildlife and fish management.

This led to a greater emphasis on sound fish and wildlife management practices as determined by research programs, and a continuation of a well balanced program designed to diagnose the basic causes of game Definite progress has been made in all phases of conservation work . . . greater emphasis on sound fish and wildlife management practices, more public hunting areas, a streamlined, more effective, Game and Fresh Water Fish Commission.

#### Director Ben Mc Lauchlin Reports to the People!

shortages and poor fishing and to work out methods of remedying such shortages.

We think, that perhaps the activities during the past two years might serve as an indication of the progressive determination of the Game and Fresh Water Fish Commission to do something about this program of fish and wildlife conservation.

Previously all Game Commission programs were organized and put into effect from one state-wide office in Tallahassee. This past year, we have undergone a decentralization or a reorganization, with the establishment of five divisions—Northwest Florida, Northeast Florida, Central Florida, South Florida, and Everglades—with headquarters in Panama City, Jacksonville, Williston, Lakeland and Okeechobee.

This system has proved successful for each division office is staffed with a director, education officer, pilot and airplane, game and fish management technicians, and wildlife officers. A look at the record of programs and other projects carried on within the division areas assures us that the move was a good one, for it helped to bring about more efficient uses of Commission personnel.

The pay scale for Wildlife Officers and other employees has risen under a personnel classification plan, making for more efficient employees to enforce the game and fish laws and to work on conservation and restoration programs. A uniform pay scale has been established with liberal vacation, sick leave and retirement benefits.

#### PUBLIC HUNTING AND FISHING AREAS

In 1947, just five years ago, the Commission operated controlled hunts on only 213,700 acres of public grounds. Today, more than 1,700,000 acres of land and water were opened to controlled public hunting and fishing. For sportsmen who do not own land, these acres offered them a good shooting ground. The cost of such wildlife management areas average about 10 cents an acre per year for restocking, patrolling, fencing and supervision.

#### HYACINTH CONTROL

The Commission has purchased a spraying plane to be used in controlling water hyacinths, and a special budget which included personnel and equipment has been established for this year. An estimated 250,000 acres of water are infested by this scourge, and an active program is









Hunting and fishing were never better in Florida . . . Here's the evidence.



Modern transportation helps wildlife officers enforce the conservation laws.

currently in operation to stop the deadly advance of this flowering pest. The cost for controlling these plants amounts to approximately \$6 per acre. During the past year more than 3,200 acres of hyacinths on 39 lakes have been sprayed.

#### JUNIOR SPORTSMEN'S CLUBS

Probably one of the most important activities in the State regarding conservation has been the organization of the Florida Junior Conservation Club League. The League was formally chartered at Camp Rotary, near Auburndale-scene of the first Junior Sportsmen's Summer Camp-on August 22 when Governor Fuller Warren signed the charter in the presence of 50 delegates from 25 Junior clubs in the State. Membership of the clubs at that time was approximately 1,500 in the 27 clubs. Now, there are more than 50 clubs.

Plans are now underway for the construction of a \$25,000 summer camp where 5,000 youngsters may be trained each summer in wildlife conservation while they enjoy the many other recreational activities of the outdoors.

#### DEER AND TURKEY POPULATIONS

Our Game Biologists are striving to learn ways and means of increasing the amount of game birds and animals with their work on restoration programs throughout the State. Two of these programs serve as fine examples. In 1947, our deer population was approximately 33,000. It is now estimated to be around 50,000 and still climbing. Five years ago, a state-wide survey revealed a population of approximately 26,000 turkeys. Now the figure is in the neighborhood of 45,000.

The Commission feels that the reason behind this increase in deer and turkey can be credited to better protection by our wildlife officers, the more conservation-minded attitudes of the general public and sportsmen, the posting of land, and the game management restoration program of restocking, habitat improvement and maintenance of feeders in certain sections.

#### ACCOUNTING OR BUSINESS OFFICE

A central purchasing system has been established and has resulted in procuring of higher quality equipment and supplies at a lower price. The buying of cars is a good example. Every year, automobiles are bought at a state price, through bids, and resold a year later at approximately the same price that we paid for them.

We have appointed a properties officer to inventory the Game Commission's equipment and keep records on everything that we can. His is also the job to make periodical inspection of all the equipment. Obsolete and worn out equipment is advertised and sold to the highest bidder.

#### RADIO COMMUNICATIONS

We have a workable radio system that effectively covers the entire State today. Last year we had 90 mobile units and two fixed stations. Today we have 170 mobile units and nine fixed stations in operation, with five additional fixed radio stations





Science aids law



Airborne wildlife officers patrol the state's inaccessible areas, coordinate their efforts with the ground patrol.

ready for installation. All five of our airplanes also have radios.

#### RADIO PROGRAMS

A series of weekly 15 minute radio programs preaching conservation to more than 3,500,000 people in Florida, Georgia and Alabama has been inaugurated this year. The programs are informative, educational and entertaining, and they are broadcast over 48 radio stations in the above three states.

#### TRAVELING ZOO

We have just constructed a \$10,000 traveling wildlife display unit which will be exhibited at most of the State fairs and to most of the schools, towns, and cities on a 50-week basis each year. Twenty-two cages and tanks of animals, birds, fish and reptiles will be displayed in this conservation-educational mobile unit.

#### KEY DEER REFUGE

The Commission was instrumental in bringing the plight of the Key Deer to the attention of the press and conservationists of America. We are continuing our efforts to establish a Federal Refuge for this species in the vicinity of Big Pine Key. Today only about 50 of these deer are alive, and we hope to build them up again, establishing this reservation where they may prosper and propagate.

#### DIVISION EDUCATION OFFICERS

Under the Division system our education officers are carrying on a conservation-education program within their own areas, making talks to sportsmen's groups and civic clubs, showing movies to school children, organizing Junior Sportsmen's Clubs, sending out pamphlets depicting our game and fish, and aiding in the general program of the Commission.

#### SUMMARY

We feel that the State Game and Fresh Water Fish Commission has accomplished much with its many activities to protect and restore the game and fish resources with its limited funds, but we also feel that much more remains to be done. We're sure that with the help and

cooperation of the sportsmen and general public we can continue to do our job, that of conserving, protecting and restoring the fish and wildlife for future Florida generations.











By FLOYD D. NIXON

On November 1, 1951, the Northwest Florida Division of the Florida Game and Fresh Water Fish Commission was established, with head-quarters in Panama City. Composed of 16 counties, the Division extends from the Aucilla River, which runs from the Georgia State Line to the Gulf of Mexico, to the Perdido River, which separates Florida and Alabama.

Included in the Division are Jefferson, Leon, Wakulla, Gadsden, Liberty, Franklin, Jackson, Calhoun, Gulf, Holmes, Washington, Bay, Walton, Okaloosa, Santa Rosa, and Escambia Counties.

Game and Fish Management were perhaps the most active fields during the past biennium in this area, noted throughout the State and nation for excellent fishing and hunting areas.

In the Quail and Turkey Restoration Program, to increase the food and covers habitats for quail and turkey, 461,000 seedlings of bi-color and thunbergii lespedeza, multiflora rose, and 4,051 pounds of partridge pea and beggarweed seed, were acquired and distributed to interested sportsmen throughout the section. This Division also inspected 111 planted food plots, inspected and furnished recommendations for 16 plots of land, laid the groundwork for 400 quail food plots in breeding grounds, conducted quail feeding habits and food analysis studies, and, in Jackson County, maintained and operated experimental quail food plots.

Extensive food studies were con-

ducted on Eglin Field, Blackwater, Gaskin and Apalachicola Forest Refuge, in the Deer Restoration Program. The Division assisted in planting food plots and trapped 18 deer from closed areas for restocking or releasing in other areas.

Two bears were released in Bay County; 2 troublesome bears were captured in Jefferson County, for releasing in other areas.

In Fish Management, technicians inspected 234 ponds and public waters, of which a great number were also renovated. They participated in 21 experiments to control the roughtish population and distributed 1,323,376 fingerlings. The hatcheries at Wewahitchka and Holt produced 108,995 bass fingerlings and 1,523,375 bream fingerlings. The two houses at the Wewahitchka hatchery were repaired and new control valves were installed at the Holt hatchery.

Law enforcement is always an important part of fish and game management. Wildlife Officers spent 96,442 hours on land patrol and 19,832 hours on water patrol during the last two years. They covered a total of 709,267 miles, investigated 1,926 complaints and alleged violations, and checked 77,649 licenses. They made 969 arrests. They sold 1,624 commercial licenses.

The Wildlife Officer pilot spent 1,043 hours on air patrol, and in four instances, assisted other law enforcement agencies in the pursuit of their quarry. He located 15 lost persons and assisted many times in the recovery of stolen property.

Law enforcement personnel have maintained an officer's camp in Eglin Forest, managed the controlled deer hunt in Eglin Field, and conducted the controlled hunt in the Apalachicola Forest.

Wildlife Officers assisted the Florida Fox Hunters Association in a three-day fox trial in Walton County and assisted the Florida Coon Hunters Association in a one-day trial at DeFuniak Springs.

Information and Education is a vital part of our work. The Education Officer alone made 78 speeches and showed movies to organized civic clubs, sportsmen groups and schools. Six junior sportsmen's clubs were organized and the Education Officer was counselor at the first summer camp held for junior clubs. He supervised 22 camping trips for sportsmen's clubs and assisted in the formation of the state-wide Junior Conservation Club League. He assisted in the Florida Wildlife FFA

contest and aided when the wildlife exhibit was in this area.

The Education Officer doesn't make all the speeches. The Division Office, headed by the Director, addressed 83 sportsmen's clubs and civic groups and made 42 talks to schools and other organized groups. Thirteen division meetings, to coordinate our efforts and to increase efficiency, were held. The Division Director selected and supervised the creation of three turkey management areas and distributed 250 turkeys in these areas. Sixty-two permits were made out and some 2,500 letters answered.

At the end of 1952, the Northwest Florida Division had 33 radioequipped mobile units and the four base stations. Recently, a radio engineer was employed for installation and maintenance of the equipment in this and surrounding territory.

The Division is composed of a Division Director, Education Officer, Pilot, three Game Management Technicians, one Fish Management Technician, and twenty-eight Wildlife Officers.









Results from hunting in Northwest Florida.



#### THE NORTHEAST

## Division Reports

By GEORGE INMAN

The first year's operation since the establishment of the Northeast Division at Jacksonville has been marked by unquestioned improvement in the morale and appearance of law enforcement officers, better public relations, and a more sympathetic public understanding of the aims, ambitions, and problems of the Game and Fresh Water Fish Commission.

The record of this Division is conclusive proof of progress and stands as a definite vindication for the establishment of the divisional offices throughout the State, facilitating quicker and more efficient service from the Commission to the public.

The Law Enforcement Division of the Second District has registered great improvement and the 29 Officers here are demonstrating added interest in their duties and are better qualified for their responsibilities.

Through their efforts last year in Madison, Suwannee, Nassau, Alachua, and Duval counties, they confiscated approximately 7,000 yards of illegal fish nets, 6 boats, a number of outboard motors, and seized 15,000 pounds of illegally transported game fish. They removed 850 cat squirrels which were endangering the Jacksonville area and removed

40,000 bass, bream and bluegills from pot holes resulting from drought, releasing them in deep waters for fishing.

The use of Deputy Officers has been very successful and has met with excellent public support. When this project is completed in the 16 counties within this district, we will have 160 part-time officers who doubtlessly will prove of great value in increasing the district's efficiency.

Hyacinth control spraying has been inaugurated at Lake Lucina, Hamburg Lake, Lake Orange, Newman Lake, Cunningham Creek, and Alligator Lake, and more of this work is in progress for other fresh water areas in the district. More than 200 brush piles have been placed in the St. Johns River and its tributaries—Doctors Lake, Lake Brooklyn, and Ocean Pond. We now have more requests for projects of this kind than we can fill.

Under supervision of Wildlife Officers, professional seining crews have removed rough fish from Lake Lochloosa, Orange Lake, Lake Washington, and Lake Bedford, with less than one percent mortality, removing in excess of 60 tons of rough fish. In excess of 7,000 special cast net permits have been issued by this office.

A special fishing party for disabled war veterans from the Lake City Veterans Hospital. was held last year, with 20 representatives of three wars, including crippled or blind veterans, participating. Commission boats, manned by Wildlife Officers, transported the veterans on the trip, with Veterans Administration doctors and nurses on hand at all times. The trip proved so successful that we plan to make it, at the request of the VA, an annual event. The project was described in the American Legion Magazine.

In past years Wildlife Officers have experienced some difficulty with armed forces personnel stationed within this district, who although enthusiastic hunters and fishermen, consistently failed to purchase resident licenses. Working closely with officials at the various stations who then appointed qualified officers as game officers at the stations, our relations with the military have greatly improved and finding a member of the armed forces hunting or fishing without a license is now the exception rather than the rule.

During July of 1952 the first of 200 tracts in a 38,000 acre forest section near Hastings was seeded. It is anticipated that these seed plots eventually will attract sufficient game birds to provide excellent hunting. The entire area will be open for free use of hunters during each hunting season. Since the establishment of the divisional office in Jacksonville, we have trapped and released hundreds of quail in Duval, Columbia, Madison, Bradford, Alachua, Nassau, and Hamilton counties.

Two Wildlife Officers accompanied a group of Jacksonville boating enthusiasts on a 1,250 mile boating trip from the Okefenokee Swamp in Georgia to Miami and return to Jacksonville, as a public service of the Division. This trip received a great deal of favorable publicity and resulted in increased good will and understanding of the Commission's activities.

Representatives from this office have appeared before scores of groups of Boy Scouts, crippled children, orphans, and Future Farmers of America, making conservation talks and showing conservation movies. Three youth groups were formed, at Yulee, Branford, and Jacksonville. At present we are forming a Youth Conservation Club in Jacksonville which will number approximately 4,000 members, making this the biggest organization of its kind in Florida. A growing interest in conservation and the Commission activities has been shown by churches, schools, clubs and organizations and we have distributed thousands of pieces of literature to these persons.

We have made a constant effort to inform the public of important Commission policies and things of interest to the public through the facilities of the press, radio, and television and we have received excellent cooperation from all three mediums. As a "feeler" on the drawing power of television, this office authorized a sportscaster to give away 200 copies of "Florida's Fresh Water Fish and Fishing" to the first 200 persons to mail him a written request for the book. To our amazement he received 1,125 requests, several of them telegrams, from a radius of nearly 200 miles.

Counties within the Northeast Florida Division are Madison, Hamilton, Lafayette, Suwannee, Duval, Baker, Columbia, Nassau, Alachua, Bradford, Clay, Union, Dixie, Gilchrist, and Taylor. Headquarters are at 516 Washington St., Jacksonville.

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A pleased patron of Northeast Florida.



## Central Florida Division

By DAVID E. SWINDELL

Here in the Central Florida Division, located at Williston, are the Fisheries Experiment Station, Hyacinth Control headquarters, and wild turkey and quail hatcheries. Embracing twelve counties, this Division contains four Game Management areas and an experimental feeding tract for quail named in honor of I. N. Kennedy, former Director of the Game and Fresh Water Fish Commission.

The Division includes Levy, Putnam, Flagler, Marion, Volusia, Citrus, Lake, Sumter, Brevard, Orange, Osceola, and Seminole counties. The establishment of Central Florida Division headquarters at Williston, in Levy County, has brought 20 full-

time employees to the City of Williston and made this community a center of game and fish activity.



The four Game Management areas in this Division are the Ocala National Forest area, the Gulf Hammock area, the Farmton area, and

the Tomoka area.

Game Management technicians from these areas, as well as resident biologists here at Williston, are often called upon to discuss game management problems with individuals, to make talks at various sportsmen's group meetings, and to provide necessary leadership for game improve-

Wild turkey and quail hatcheries are located at Williston and both species are raised in the hatcheries and are released on land suitable for their development. About 1,000 turkeys are to be released this year, with each of the divisions receiving a proportionate share. Both turkeys and quail are now paired off for the Spring hatching season.

An experimental feeding tract for quail has been established at Leesburg. This 700 acre tract is being made available through the courtesy of Mr. Blanton, of Leesburg, and is called the I. N. Kennedy Experimental Quail Feeding Area, in honor of the former Director.

The Fisheries Experiment Station at Leesburg is carrying on a large-scale experiment in the use of the haul seine as a management tool in the controlling of fish populations and other related and important research problems are being studied at this station.

A full-time Extension Fisheries technician is available in this Division, working primarily with farm ponds in restocking and fertilization practices. He has distributed 15,000 fingerlings in the past few weeks and has examined and made improvement recommendations for a great many pools. Quarters are provided here for the U.S. Fish and Wildlife Service officer.

Hyacinth Control Headquarters are located in the office of the Central Florida Division. This important work is well underway and between the airplane crew and the boat crew, have brought approximately 3,200 acres of hyacinths in 39 lakes under treatment.

During the last two years, this Division has rendered public assistance to 1,606 persons, checked 45,700 licenses, sold 2,069 commercial licenses, and built 50 brush piles.

Four hundred and ninety-one arrests were made for violations and the Division confiscated 5,330 yards of nets, 5,500 pounds of fish, 5 motors, 1 trailer, 150 alligator hides, 7 guns, and about 500 fish traps. Convicted violators of Florida game and fish laws spent 880 days in jail; no record of the total amount of fines is available.

Relationships with sportsmen in the Division area and particularly with the people and City of Williston, in which Division Headquarters is located, is excellent. The Division enjoys a very amicable relationship with the City of Williston.

Two gasoline pumps are located at headquarters, and this Division buys all vehicular and aviation gasoline at wholesale prices at a considerable savings.







Various commission activities in Central Florida.



## South Florida

By FRED W. JONES

Law enforcement—one of the important phases of game and fish conservation—has been better within the boundaries of the South Florida Division since November, 1951, than ever before.

This is shown conclusively by the increased sales of commercial fishing licenses and by the number of major law violations cases which have been made. Wildlife officers made 235 arrests for violations during the five-month period from September to January alone.

Law enforcement has also been

made more efficient by the addition of ten radio units in vehicles, through the establishment of two stations, (one at Lakeland and one station at Myakka State Park), and by the consolidation of the former four supervisor areas into three.

Youth activities have been a major concern of this Division during our operations here at Lakeland.

The Division has conducted four Fishathons for youngsters in Arcadia, Tampa, Clearwater, and St. Petersburg, all with great success and enjoyment to the youngsters.

Eighteen youth conservation clubs are now in operation with several more contacts made from which additional clubs are expected to be organized in the near future.

This Division cooperated with the State Information and Education Coordinator in securing and operating a Youth Conservation Camp at Auburndale, for one week, at Camp Rotary on Lake Juliana. A motorcade was planned, cook obtained, arrangement for special events, and all the necessary planning details were handled by division personnel.

Like the Fishathons, the camp was of inestimable value in our youth program and in the furtherance of conservation.

Some 48 speeches were made by the Division Director and the Division Education Officer in connection with conservation and the fostering of sound conservation practices. Many requests for literature and other information have been handled, and the Commission movies are in great demand and are continually booked. The Division has also furnished many photographs and news items to newspapers with the area and many feature stories have been written about Commission activities here.

A fish management technician has been maintained by the Division and one wildlife officer has been assigned to fish management. These men make arrangements for securing fish for Fishathons, conducted about 50 seine hauls for rough fish control, and have participated in the improvement of many fish ponds.

In conjunction with the fish management program, the Division has operated the Winter Haven hatchery which has produced, transported, and released several thousand bass fingerlings in public waters throughout the state.

The Division also cooperated with the hyacinth branch and to date some 500 acres have been cleared. There are several more bodies of water on the schedule for future operations.

The hunting season, on the whole, in this area, was extremely satisfactory with increased supply of all game species being reported by hunters, concrete evidence that conservation pays!



A fishathon angler.





### From the Everglades

#### By CURTIS WRIGHT

Two of the Nation's famed game and fish areas—Lake Okeechobee and the Everglades—are included in the aptly-named Everglades Division of the Game and Fresh Water Fish Commission. It should be expected, then, that the report of this Division would contain references to lost hunters and fishermen.

During the last two years Enforcement Officers of this Division have located 17 lost fishing parties on Lake Okeechobee and 30 lost parties in the Everglades, performing a service unmatched in any other Division of the State. In addition, the officers recovered the bodies of 3 drowned persons and furnished the information resulting in the arrest and conviction of 3 cattle rustlers.

Game Management was the outstanding activity of this Division during this biennium and our records show 6,323 hours spent on this

phase alone.

Several thousand acres of land have been acquired here for public hunting purposes and three controlled hunting areas were opened to public hunting. This has afforded Wildlife Officers the opportunity to contact more hunters and to obtain information needed by this Division for the implementation of its objectives. The opening of these areas has created general good will and better public relations.

Four managed hunts were held here last year, with the following

results:

Collier County Hunt—87 deer, 356 turkey gobblers, 427 turkey hens, 1,088 quail, 259 squirrels, 162 doves, and 2 ducks.

Fisheating Creek Hunt—5 deer, 108 turkey gobblers, 158 turkey hens, 5,311 quail, 638 squirrels, 108 doves, and 146 ducks.

J. W. Corbett Hunt—8 deer, 1,156 quail, 4 doves, and 4 ducks.

Hendry County Hunt—17 deer, 126 turkey gobblers, 188 turkey hens, 226 quail, 186 squirrels, 1 dove, and 47 ducks.

Approximately 300 wild turkey and 1200 quail were trapped in closed hunting areas and were released in open hunting areas for restocking purposes.

There are 20 farm fish ponds under management in this Division which are producing. We have stocked 15, inspected 83, and have completely renovated 4 new farm fish ponds. Fish Management personnel also worked at five fairs, explaining the various fish tank exhibits.

Everglades Division personnel traveled 757,222 miles this past biennium in the service of the Commission. During this time, 1,191 arrests were made, 39,221 licenses checked, and the Division personnel spent 134,207 hours on land patrol, 6,261 hours on water patrol, and 2,747 hours on air patrol.

Six hundred and twenty commercial licenses were sold, 1,395 complaints and alleged violations were

investigated and 711 informers were contacted.

More than 30,700 persons were contacted regarding conservation and game and fish management practices, 48 speeches to civic, school, and sportsmen groups being made, with 715 hours spent for community service. In addition to these activities by Wildlife Officers, the Education Division made 79 speeches, distributed 7,656 pieces of literature, showed conservation films to a total of 3,567 persons and was responsible for 160 news articles and items written by staff correspondents for local newspapers after contact with this office.

Nine special exhibits and displays were created for use at various fairs and exhibitions within the Division area

(Continued on Page 32)





This Miss finds excellent fishing in one of Florida's re-stocked lakes

## Fish Management

#### By JOHN F. DEQUINE

Fish management activities during 1951-52 pointed toward the accomplishment of two major objectives: the improvement of recreational fishing, and the proper utilization of Florida's freshwater fishery resources. In attempting to attain these aims, emphasis was placed on four major programs. These were the fish management extension service, fish culture, aquatic weed control, and fish population control. Accomplishments in each of these during the biennium are discussed individually below.

#### Fish Management Extension Service

In late 1950, a program of extension service similar to that applied in the field of agriculture was instituted in freshwater fish management. This service included technical assistance to individuals and organizations desiring help and advice in various problems related to fish and other aquatic life throughout the state. During the period from January to November 1951, more than 600 requests for this service were filled. These services included assistance on the management of small lakes and ponds for fishing, control of aquatic vegetation, bait minnow production, fish mortality, and related problems.

By far the greatest demand, however, was for help in the management of small ponds. Such assistance included fish population analyses, determination of factors interfering with best fishing, and recommendations for correcting and improving fishing conditions. Recommendations were made for several hundred ponds and lakes, some of which had unbalanced fish populations completely eliminated through poisoning, were subsequently restocked and fertilized, and are now producing excellent fishing. From November 1951 to the end of 1952, this service was administered through the newly formed regional divisions and is reported on elsewhere in this report.

#### Fish Culture

The Commission continued to operate its fish hatcheries, located at Holt, Wewahitchka, and Winter Haven, during the biennium. Citrus plant pollution affecting the water supply continued to interfere with maximum production at the Winter Haven hatchery, while low water levels in the Dead Lakes reduced the output at Wewahitchka. Operations at the Blackwater Hatchery near Holt, however, were quite successful. An innovation at the Holt

station was the hatching and rearing of bass fingerlings for use in West Florida. Under the system now in effect, a number of fingerlings are held from one season and used as brood fish the next, as their rapid growth in the fertilized ponds allows them to attain maturity during one year.

While the demand for hatchery fish for stocking new and renovated ponds has increased greatly during this biennium, directly as a result of the extension service work, requests for stocking large unmanaged waters have declined. Presumably this decline has occurred because more Floridians have come to realize that stocking of fish in such waters does not improve fishing, but is a waste of their license funds. A summary of the fish distributed and the waters stocked may be found in the following table.

Hyacinth Control

Early 1952 saw the beginning of an attack on one of the foremost enemies of freshwater fishing—the water hyacinth. This plant has encroached upon many of the state's public fishing waters, and has covered a number of the more easily accessible lakes, completely eliminating fishing. In addition to interference by hyacinths, water lilies, bonnets, and other aquatic plants have reduced available fishing waters in many areas.

With the aid of the Dingell-Johnson Federal Aid to Fisheries funds which first became available in 1951, a limited program of controlling these obnoxious aquatic plants has been started. Under this program, public fishing waters where hyacinths or other plants have become a nuisance are treated with chemical sprays which kill the plants. The project has been equipped with a PA-18 125 h.p. airplane for spraying the larger areas and a boat with portable power sprayer to follow the airplane and work on waters where use of the plane is not feasible. All equipment and manpower for performing the necessary work is provided under the program, while local interests reimburse the Commission for the necessary chemicals and other materials used at cost.

Preliminary surveys to determine the most practical method of control have been made on 48 bodies of water. A total of 39 waters, comprising 3,209 acres of hyacinths or other plants, had been treated up to the end of 1952. It is hoped that additional funds can be made available in the future for the expansion of (Continued on Page 39)



Commission restocking a Florida lake with fingerlings.

#### Number of Fish Distributed and Numbers of Waters Stocked During Calendar Years 1951 and 1952

| 1 9 5 1                       |                              |  | 1952  |  |   |  |
|-------------------------------|------------------------------|--|---|--|---|--|
| Number of fish<br>distributed |                              | Number of<br>waters                                    |   | Number of waters   |   |  |
| Bass                          | Bream                        | stocked  | Bass  | Bream  | stocked   |  |
| 31,951                        | 435,202                      | 110  | 91,613  | 1,162,810  | 264   |  |
|                               | 431,300                      | 17   |   | 260,500  | 22  |  |
| 237,070                       | 14,280                       | 100  | 408,880   | 9,755  | 104   |  |
| 269,021                       | 880,782                      | 227  | 500,493   | 1,433,065  | 390   |  |
|                               | distrib  Bass 31,951 237,070 | Number of fish distributed  Bass Bream  31,951 435,202 | Number of fish distributed         Number of waters stocked           Bass         Bream           31,951         435,202         110 | Number of fish distributed         Number of waters stocked         Number of distributed           Bass         Bream         Bass         Bass           31,951         435,202         110         91,613            431,300         17            237,070         14,280         100         408,880 | Number of fish distributed         Number of waters stocked         Number of distributed           Bass         Bream         Bass         Bream           31,951         435,202         110         91,613         1,162,810 |  |



Rescuing fish from a pond that is going dry.



## Game Management

By EDWARD B. CHAMBERLAIN

During the past biennium the principal activities of the Game Management Division have been concerned with research, development, land acquisition, and operation of managed hunts. In all of these phases there has been an expansion of work and accomplishment during the period.

As in the past, much the greatest part of the financial load of Florida's wildlife management program has been carried by the United States government under the provisions of the Federal Aid in Wildlife Restoration Act—commonly called the Pittman-Robertson Act. This Act, approved by Congress in 1937, provided that funds realized from an excise tax on sporting arms and ammunition be apportioned to the

states for use in wildlife restoration work, according to their area and their annual sale of hunting licenses. The state must match each three dollars of federal money received with one dollar of state money. This money is to be spent by the state either on research, development, land acquisition or maintenance of projects, with a small percentage of the total fund set aside for administration. All expenditures must be approved by the U. S. Fish and Wildlife Service, the trustees of the Pittman-Robertson fund.

Since personnel as well as projects must be approved by the Fish and Wildlife Service, the Act serves as a stimulus to state game departments to maintain sound and progressive research and management programs under the direction of scientifically trained men.

In the fiscal year 1950-51, Florida's Pittman - Robertson allotment was \$121,214.92; in 1951-52, \$232,085.32, and in 1952-53, \$133,265.13. Table 1 shows the budgeted expenditure of total Pittman-Robertson funds during the fiscal years 1950-51 through 1952-53.

In the past, Florida's game management budget has often been less than its Federal Aid apportionment, permitting a reserve to be accumulated. During the past biennium however, the program has been so expanded that the total apportionment is used in each year's operations

The established policy of employing only necessary and essential personnel has been continued. At the present time the game management division staff consists of 17 trained men, 10 untrained men of whom five are on a half-time basis, two secretaries and one bookkeeper. There are 19 active projects.

#### Research

In any sound game management program research plays a vital and leading role. It is the light which shows the path to be taken by development and land acquisition. Valid and realistic research gives the information which is essential in management.

During the past biennium, eleven research projects were conducted. In addition, the results of another project were published as Technical Bulletin No. 1, "Deer and Turkey Habitats and Populations of Florida." The active research projects have dealt with all the more important game species, and in some cases have been directed toward obtaining management information for specific areas.

Quail have been the subject of study on four projects. Special efforts have been made to develop methods compatible with cattle raising for increasing this species in south Florida's flatwoods. At present, emphasis is being placed on obtaining data on year to year quail population fluctuations as correlated with food and weather conditions. An investigation of quail food preferences was conducted largely in the preceding biennium, but was completed and the final report filed in the present. Extensive experiments have been conducted with quail feeders, a practice which holds much promise for increasing quail populations where food is the limiting factor. Investigation has also been made to determine the results of establishing lespedeza food plots for quail.

Waterfowl and dove have each been studied through a research project. During the present biennium, the principal activities of the waterfowl project have been population and kill studies, location of areas for acquisition and development, and carrying capacity studies. The fall 1952 population of the Florida Duck was determined to be the highest in the past five years, approximately 30,000 birds.

The primary aim of the dove investigation has been the gathering of information on which to base sound regulations. Activities have consisted of trapping, dyeing, and banding birds, making road and call counts to gain population data, and collection of hunting data. Florida

#### TABLE 1

#### PLANNED EXPENDITURES OF FEDERAL AID FUNDS

During the Fiscal Years of 1950-51, 1951-52 and 1952-53

|                           | 1950-51      |      | 1951-52      |      | 1952-53      |      |
|---------------------------|--------------|------|--------------|------|--------------|------|
| Coordination              | Amount       | %    | Amount       | %    | Amount       | %    |
|                           | \$ 13,798.40 | 6.4  | \$ 14,732.00 | 6.8  | \$ 14,364.90 | 6.4  |
| Surveys & Investigations  | 36,393.02    | 16.8 | 59,529.61    | 27.4 | 49,119.23    | 22.0 |
| Development & Maintenance | 87,808.50    | 40.7 | 103,399.16   | 47.6 | 158,051.14   | 70.6 |
| Land Acquisition          | 78,000.00    | 36.1 | 39,437.95    | 18.2 | 2,400.00     | 1.0  |
|                           | \$215,999.92 |      | \$217,098.72 |      | \$223,935.27 |      |

was the first state to make extensive use of the technique of color-dyeing large numbers of doves, a practice which has proved most valuable in tracing migratory flocks. As a result of this study, Florida in 1952 had a state-wide split season, and the best dove hunting in years.

Wild turkey have been studied on five projects. The principal objectives have been the gathering of information on populations, kill, food habits, range, and sex ratios. Special efforts have been made to obtain data on the utilization and effects of artificial feeders and to design improved feeders.

Five research studies have been concerned with deer. These have been investigations of range and habitat, life history, populations, kill, age and sex ratios, food habits and management practices. Two of the studies were designed specifically to determine the best management for the important Ocala and Eglin herds. An intensive study of the Key deer has been made to find out means of saving this unique sub-species from extinction.

In game management, as in any other business, it is essential to know the status of current stocks, the harvest and replacement. To accomplish this, a broad survey of wildlife harvests in the state has been conducted. This has given valuable and much needed information on hunter activity and game kill, facts never before available.

Development

The developmental activities of the Game Management Division during the past two years have been extremely varied, including fence construction and maintenance, posting, road and bridge maintenance, planting of food plots, controlled burning, restocking with trapped turkey and deer, construction of checking stations, and distribution of planting stock. Most of this work has been carried out on the Commission's wildlife management areas, but some, particularly distribution of planting stocks, has been on private lands. In addition, all members of the staff

are available as consultants to any landowner.

During 1951 and 1952 the following amounts of planting stock were distributed, primarily to north and central Florida:

| thunbergii and bicolor<br>lespedeza plants<br>thunbergii lespedeza | 888,500 |      |  |
|--|---------|------|--|
| seeds  | 110     | lbs. |  |
| bicolor lespedeza seed   | 17      | lbs. |  |
| multiflora rose plants   | 106,625 |      |  |
| partridge pea seed   | 2,200   | lbs. |  |
| common lespedeza seed  | 3,800   | lbs. |  |
| Florida beggarweed   |         |      |  |
| seed   | 2,481   | lbs. |  |

Stocking wild-trapped turkey and deer in localities which have good habitat but little game has been a very important part of the game management program. These releases have been outstandingly successful, and have resulted in good deer and turkey populations in areas which a few years ago had none of these species. For example, in Hardee County, which had no turkeys, approximately 80 wildtrapped birds have in three years built up a population of close to 500. During the past two years, 170 deer and 416 turkey were released in breeding grounds, closed counties, and wildlife management areas

On the Gulf Hammock Wildlife Management Area, the principal activities have been controlled burning, planting of food plots, fence maintenance, road clearing and maintenance, and operation of the controlled hunt. Approximately 30 miles of new fence were constructed on the Steinhatchee Management Area, and all the old fence maintained. Two new checking stations were constructed and two moved to better locations. All boundaries were posted, and some experimental plantings were made. Controlled hunts were conducted in both years.

Work on the Charlotte Area has consisted largely of maintenance of roads, bridges, fences, buildings, controlled burning, construction of a feed storage room, supervision of wood cutting operations, supervision

(Continued on Page 34)





## Law Enforcement

By BEN McLAUCHLIN



A clean sweep of the broom made for less Wildlife Officers, more and better equipment, a really effective two-way radio system and a much more efficient Law Enforcement program during the past biennium.

Politics had always played an important part in the hiring of the Wildlife Officers in the early history of the Game Commission, but under operational procedures of the past two years, much was changed for the good of the Game Agency. This can be easily seen by the following facts:

In 1950-51, the Commission had 190 wildlife officers who made 1,313 arrests. During the past year 154 officers arrested 1,484 game and fish violators leaving us with the thought that 20 per cent less men made 16 per cent more arrests during similar periods of time.

Vigorous Law Enforcement is always essential to the successful operation of a good conservation program, not that the officers tried to make a record number of arrests for these violations; their major aim was one of trying to prevent these illegal happenings.

With that thought in mind, the Commission spent considerable time in the training of Wildlife Officers, sending them to the Wildlife Officers School at Williston Air Base and in general holding meetings at the Division level in which the men were instructed in various operational activities. Every summer there is also a series of refresher courses taught at the school.

The pay scale for wildlife officers has risen under a personnel classification plan, making for more efficient employees to enforce the laws. Included in this plan are also liberal vacation, sick leave, and retirement benefits.

One of the important aspects of the Law Enforcement branch is that it is subdivided geographically, corresponding to the five Conservation Divisions, with a force of wildlife officers, headed by several Area Supervisors in each Division.

Their job is similar in all five Divisions, with few exceptions, and within the past two years through the use of good radios, good automotive equipment, good motors and boats, a pilot and airplane in each area and several land base radio stations, the entire state is almost effectively covered.

One of the sad things, however, about the Law Enforcement Division is that as of now, each officer patrols almost a quarter of a million acres of land and water. Future plans call for the addition of at least one more wildlife officer—including the hiring of veterans under an on-the-job training program—to each county, if the Commission can get the necessary funds.

In looking over our summary of Wildlife Officers activities for the past year, we found quite a few interesting facts regarding the distribution on an average officer's time during one month.

The average Wildlife Officer traveled 1,360 miles each month, checked 129 fishing and/or hunting licenses, spent 226 hours on land patrol, 44 hours on water patrol-with the pilots spending 59 hours on air patrol -made two speeches to organized groups, spent 8 hours on game management work and six on fish management work, four arrests, talked to 55 persons regarding conservation measures and principles, contacted five informers, rendered four hours of community service, investigated five complaints, sold 12 commercial fish dealers licenses, spent four hours A clean sweep of the broom made for less Wildlife Officers, more and better equipment, a really effective two-way radio system and a much more efficient Law Enforcement program—

in professional improvement, labored on equipment maintenance for four hours, spent five hours on demonstrations, fairs, etc., rendered assistance to three persons, worked on their report for four hours, seized five illegal fishing devices, spent 2½ hours in division and general public meetings, and attended court for three hours while filing charges, etc.

In addition to that, the Wildlife Officers are often called upon to do other things. In the Everglades Division, enforcement men have recovered the bodies of 5 drowned persons in Lake Okeechobee and have located 11 lost fishing parties on the lake and 24 lost parties in the Everglades.

Information furnished by Wildlife Officers has resulted in the arrest and conviction of two cattle rustlers. All of the above figures indicate that the average officer works 11½ hours each day for the Commission or doing Commission activities.

The success of law enforcement is usually determined by the will of the people in any particular section of the State. Enforcement has been difficult in some areas, due to a lack of interest or misunderstanding by the people. If the conservation program is to be a successful one which

will result in increased game and fish resources, the Game Commission must have the help of the people throughout the entire state, to see that the rules and regulations are carried out, to see that illegal hunting and fishing devices are seized and to see that the violators are brought into court.

The Florida Game Commission also realized that only through the cooperation of an informed and interested public can game law violators be controlled. One of the major responsibilities, therefore, of the Wildlife Officer is that of carrying on an educational and informational program, designed to halt such violations. While law enforcement has been one of the primary duties, the officers have performed many supplementary activities. These include assisting with managed hunts, trapping and distribution of quail, roughfish control work, conducting surveys and investigations, showing films and making talks to organized groups, and generally serving as the public relations men for the Game Commission, for they are the medium through which the public has greatest contact with the Commission and with commission programs and activities.

Wildlife officers rehearse "arrest" of illegal seiner.





## INFORMATION and Education

Conservation has really started coming into its own!

For many many years, conservation was really confused with the

of mostly talk, without any action, of the majority of the people living in the State of Florida. Unfortunately, such is still the case in a word conversation, for the job of few of the counties where some perprotecting and restoring our natural sons like to hunt and kill wildlife resources of game and fish was one on a year-around basis, while in

several other areas the unsportsmanlike conduct of illegal seining and dynamiting of fresh water fish still

But the majority of the people of Florida have begun to realize that something must be done in order to A planned, well-coordinated program of Information and Education for effective conservation—that's what Florida needs to obtain the necessary public understanding of the importance of conservation, to insure sufficient game and fish for all. And that's what Florida has in the Game and Fresh Water Fish Commission!

insure the increase of these resources so vitally necessary to the economics of the State, for concrete figures, as ascertained by prominent sportsmen and financial authorities, have told us that "Florida's hunting and fishing is BIG BUSINESS, amounting to more than a Billion Dollars annually."

Numerous attempts were made to gain this increase of resources; restocking was done at a cost of many thousands of dollars, the law enforcement staff of wildlife officers was increased, and laws and regulations were passed, prohibiting this and allowing that, and still no appreciable increase of these resources was noted.

Then Education made its way into the picture, and with its instruction came a program designed to acquaint the people with the immediate need for conserving and protecting the few resources of game and fish on hand and a full-hearted effort on the part of everyone to restore the habitat so necessary for the propagation of Florida's animals, birds, and fish.

The way was torturous, with the Education program often being pushed aside by other facets of conservation work. But the program continued rolling along, slowly picking up speed, for the need for such a project to inform and educate the people with regard to conservation activities was seen by the morealert, far-seeing residents of the State.

Throughout the years the Information and Education grew up and began to take an equal place among the other adults of the Game Commission overall picture—the Game Management, the Fish Management, and the Law Enforcement.

Information and Education Activities during the past biennium reached a new high in the history of the Game and Fresh Water Fish Commission, and through a series of education programs which has engaged the use of all publicity media and all educational outlets, the people and children of the State have indeed become more conservation-conscious.

Probably the most important undertaking during the past biennium has been the establishment of five Division offices, each of which is staffed with an Education Officer, and other personnel of the Game Commission. His job is very similar to that of the State Coordinator of the Information and Education Division in that he carries out all phases of the Information and Education program within his own particular area.

At the present time our Education Officers are: Arthur Nixon, Northwest Florida Division; Bill Snyder, Northeast Florida Division; Charles Clymore, Central Florida Division; Bob Revels, South Florida Division; and Denver Ste. Claire, Everglades Division.

All Education Officers are responsible in seeing that an educational program master-minded by the Director of the Commission and coordinated by the State Education Officer is carried on in its entirety in all counties of their particular area.

For the purpose of this report we are going to attend strictly to those Information and Education practices carried on by the State Coordinator's office in Tallahassee. We must remember, though, that all these programs and projects are also carried on in the Division offices.

Two outstanding projects during the past year in the Information and Education Division were the Youth Conservation Club movement and the traveling wildlife trailer.

The Youth Conservation Club program, getting off to an unheralded start in January, 1952, has made an unprecedented progress. Starting with the St. Petersburg Junior Rod and Gun Club and traveling the circuit throughout the entire State with an estimated 50 clubs organized at the end of 1952, these clubs were formed in cities throughout the entire State, from Pensacola to Jacksonville, down to Miami, and up to the West Coast.

The summer of 1952 saw the inauguration of the first Junior Sportsmen's Sumer Camp and the chartering of the Junior Conservation Club League of Florida. Future plans for this youth movement call for the construction of a permanent educational-recreational summer camp donated by Cecil M. Webb, former Chairman of the Game and Fresh Water Fish Commission from Tampa. It is expected that this camp will cost an estimated \$25,000 and it is hoped that it will be one of several



Junior sportsmen learning finer points of archery.

summer camps to be established within the next few years.

Our traveling educational wildlife exhibit was constructed at a cost of approximately \$10,000 and was first displayed on October 1, 1952, after which it began to take in many of the county fairs, schools and communities in the State of Florida. It is expected that an estimated 6,000,000 people in the state of Florida will see this display during its first year on the road.

There are 22 cages and tanks on the trailer carrying the following animals, birds, snakes and fish: deer. bear, eagle, hawk, geese, turkey, quail, squirrel, otter, alligator, coon, wildcat, fox, duck and several species of fish and snakes.

Also during the past year a series of weekly 15-minute programs preaching conservation to more than 3½ million people in Florida, Georgia, and Alabama has been started. The programs which are broadcast over 48 radio stations in the above three states are informative, educational, and entertaining. The majority of them have been recorded in the open taking many game commission activities and programs as well as on-the-spot records of field trials, deer hunts, and related outdoor activities.

It is expected that several new radio stations will be added to the release list of these taped recordings so that the entire State will be effectively covered by the program "FLORIDA WILDLIFE ON THE AIR."

During the past two years the

GUNPOWDER
& ALCOHOL
DONT MIX

SHOOTING IS FUN CAREFUL
FLORIDA GAME & FRESH WATER
FISH COMMISSION
PREVENT FOREST & GRASS SIRES

breakdown on activities of the Information and Education Division included the following:

An estimated 39,428 pieces of literature have been distributed to interested persons in every state of the Country, an estimated 163 letters per month have been answered for persons requesting information on hunting and fishing, 696 films from our library have been shown to sportsmen's clubs, civic groups and other organizations in more than 43 states of the Union, and 192 press and radio releases have been sent out to every newspaper, radio station, presidents of sportsmen's clubs, and outdoor writers in Florida as well as being sent to more than 150 of the more outstanding outdoor writers in other states. Our total press release list numbers 750 names.

Our clipping service has consistently informed us that the majority of all newspapers in the State of Florida are very anxious to receive our releases since they have published them in full throughout the past two years. We feel that this is the result of distributing stories filled with factual information and no propaganda, as these stories never would have been printed otherwise.

We started last August to send out a series of weekly cartoon mats entitled "Outdoor Notes" in which we took a central Information and Education theme each month and had an artist draw a cartoon with a picture and copy which illustrated the various conservation principles and data about the particular subject in the cartoon. To date we are sending these out to more than 100 newspapers, in the State and they are meeting with a lot of interest. We definitely plan to continue this project.

The Information and Education Division has also made arrangements for a number of staff officers of the Commission to speak before numerous organizations about the State with regard to programs and activities of the Commission. We have also purchased three new projectors and three new screens in order that each of our division Education Officers might be equipped to show the many movies in our film library. We have purchased several new films to help keep the public informed on conservation principals as well as entertain them with actual pictures of hunting and fishing activities.

The majority of the films in the library were not produced by our Commission and there was no recognition on the film or during the showing that the Florida Game and Fresh Water Fish Commission was showing the film. In view of this fact, the Information and Education Division made arrangements with a film company to supply us with leaders telling the audience that "This film is being shown through the courtesy of the Florida Game and Fresh Water Fish Commission." All our films have been equipped with these leaders.

Under a separate heading you will find that we have taken up the inspiring progress of our Commission publication, Florida Wildlife Magazine. For the year 1951 it was entirely under the Information and Education Division but since April 14, 1952, when Jack Grant became Editor, it has been carried on the budget as a separate department.

The Commission's House Bulletin has been re-organized and sent to all Commission personnel each month, carrying up-to-date changes in policies and news releases, as well as personal items concerning the employees.

During the period of 1950-52, we have continued our annual Wildlife Officers School at the Williston Air Base, with the Third Annual Sessions held in the Summer of 1951 and the Fourth Annual Classes attended by the entire Commission staff of wildlife officers, game and fish technicians and division staff personnel in July and August of 1952. This school was a series of refresher courses, taught by Commission personnel to all the employees. and the subjects included everything relating to any and every type of activities encountered in the conservation program.

We are making definite plans to enlarge the wild animal and bird zoo at the Florida Industrial School for Boys at Marianna. Since it is necessary to change the animals and birds in our traveling wildlife exhibit every 5 or 6 weeks it will be necessary to increase the area of the Marianna zoo so that we will have enough animals and birds on hand for both the transfer to the exhibit and others to be displayed at the zoo, on a year-round basis.

We have promoted fishathons for children in the following cities: Tallahassee, Clearwater, Leesburg, Orlando, St. Petersburg, Lakeland. Tampa and in many other cities and towns throughout Florida.

These one-day fishing contests for boys and girls have met with quite a lot of enthusiasm among civic of-

(Continued on Page 35)





### COMMUNICATIONS



Crestview, Panama City, Blountstown, Tallahassee, Perry, Live Oak, Williston, Jacksonville, Leesburg, Lakeland, Myakka, Okeechobee and Immokalee.

Four radio engineers employed by the commission service and maintain this equipment, with the communications headquarters located centrally at New Smyrna Beach.

One of the most significant achievements of the communications division has been the working out of cooperative radio operating agreements between the commission and certain municipalities where there are fixed radio stations, for the purpose of mutual aid in communications and law enforcement. These arrangements have saved the commission a considerable amount of money, because the municipalities furnish the radio operators, the building, the antenna tower and the power to run the stations, with agreement to answer all game commission radio calls. The commission furnishes and maintains the equipment.

The communications system has proved itself as an adjunct to the commission's work in saving time and money. It has greatly improved the overall state-wide flexibility of the administrative function.





## FUTURE PROSPECTS

#### By BEN McLAUCHLIN

Throughout the last few months the Game and Fresh Water Fish Commission has been asked time and time again, "What are your plans for the future?"

We feel that much has been accomplished during the past four years, and with the cooperation of interested sportsmen and the general public, we know that much more will be done in the conservation of our natural resources.

Highlighting the Game Commission's activities during the next five provided of course that we can secure the necessary funds for these projects.

First and foremost is a better law enforcement program. Today we have an average of two Wildlife Officers per County, with each Wildlife Officer having an average of a quarter-million acres of land, and water to patrol. This is definitely more acreage than any one person can successfully patrol, and plans are now being formulated to employ more and better trained officers to aid in the enforcing of game and fish laws. It is estimated that it takes approximately \$6,000 a year to equip one officer, and one-third of all funds obtained will be used to bring this project to a successful conclusion.

Number two on the future project list is that of the acquisition of public hunting and fishing areas. With the posting of lands going into an all-time high, this is indeed of most concern to the hunter and fisherman who owns no private land or who has no access to fishing waters.

During the past biennium we have acquired through sale and agreement a total of almost 2,000,000 acres of land for public controlled hunting. This has been a godsend to the city-dwelling nimrods, and sportsmen have been quick to acknowledge our program of making good shooting available for the hunter at a very small cost.

Through agreements with private landowners, the Commission has helped the small man to enjoy much the same shooting opportunities known to the big man with his many acres of private hunting territory.

The Game Commission figures that it costs an average of 10 cents an acre per year to maintain this land for hunting purposes. The cost

includes patrolling, restocking, in some cases fencing, management, plowing of fire lanes, food and cover plantings, and several other items, all of which are deemed necessary for the best in future hunting.

We can easily acquire 5,000,000 more acres of this land for public hunting purposes, for the large landowners have been quick to see the benefits resulting from such a program, particularly with regard toward public relations. An easy problem of multiplication tells us that \$500,000 must be found before such a program can be made available.

In the public fishing area project, the Game Commission contemplates the construction of public fishing piers and landings in many of the rivers and lakes of the State and improving the fishing in waters of management areas. Along with this

will come an increased roughfish control operation, designed to destroy the many large concentrations of gars, suckers, mudfish and gizzard shad that inhabit our waterways, depleting the food supply for the game fish species of black bass, jackfish, crappie, bream, shellcrackers and warmouths.

Last but not least in the threepoint program is that of water hyacinths. Today more than 250,000 acres of this plant pest infest the lakes and streams of Florida. During the past year we have set up a separate budget to buy a spraying plane, several boats, hire several technicians, and buy other materials and equipment for the start of a really effective control program.

In this short time almost 5,000 acres have been sprayed in some 40 lakes, at a cost of approximately \$4.00 per acre for the spraying ma-

terials. If we were to complete the entire job of effectively controlling this vast acreage of hyacinths, we would need more than \$1,000,000. It would also take an undetermined amount of money each year thereafter to keep the hyacinths under control, since there is at present no known way to eradicate this plant completely.

We don't expect to get that much money in a few years but whatever extra funds we do get will be spent by and large for these three main

projects.

Along with this three-point program, we are definitely going to continue the many other projects currently in operation. These include farm pond management, food and cover plantings for wildlife, information and education work, and all the other phases of conservation activities carried on in the past.

1952 - 53

### Best Hunting Season Ever!

If the shooting success in the State's Wildlife Management Areas is any indication of the overall game kill—Florida's sportsmen had one of the best hunting seasons in years.

A total of 773 ducks, 867 deer, 1,479 turkeys, 11,762 quail, 307 doves, 11,245 squirrels and 11 bears have been killed during the past season. That's the report from 14 of the 15 Management Areas, as gathered by Edward B. Chamberlain, Federal Aid Wildlife Coordinator of the Game and Fish Commission.

Better than last year? Look at the record. During the 1951-52 season, with reports from 12 Wildlife Management Areas, the kill was 527 deer, 740 turkeys, 4,782 quail and 6 bears. And data received from wildlife officers and other game technicians indicates a better-than-average shooting success in areas other than the Management Areas, making this perhaps the best hunting season aver!

Here's the breakdown, by area:

Gulf Hammock — 439 ducks, 64 deer, 115 turkeys, 76 quail and 3,511 squirrels.

Tomoka - 29 deer, 16 turkeys, 8 quail, and 106 squirrels.

Farmton—37 deer, 95 turkeys, 128 quail, and 645 squirrels.

Steinhatchee—82 ducks, 77 deer, 21 turkeys, 76 quail, 2 doves, and 1,500 squirrels.

J. W. Corbett — 4 ducks, 8 deer, 1,156 quail and 4 doves.

Hendry—36 ducks, 17 deer, 283 turkeys, 226 quail, 1 dove, and 186 squirrels.

Collier—2 ducks, 87 deer, 679 turkeys, 1,021 quail, 140 doves, and 258 squirrels.

Fisheating Creek — 157 ducks, 5 deer, 268 turkeys, 5,307 quail, 128 doves and 638 squirrels.

Sumter County — 2 deer, 12 turkeys, 94 quail, and 1,674 squirrels.

Charlotte County—3,300 quail.

Apalachicola National Forest—12 deer and 6 bears.

Osceola National Forest—28 deer, 316 squirrels, and 1 bear.

Ocala National Forest—370 quail, 501 deer, 32 doves, 2,408 squirrels and 4 bears.

Eglin-1,500 deer.

### Meet Your Commission...

#### CECIL M. WEBB

As president of the Dixie Lily Milling Company, Cecil M. Webb figures prominently in Florida's industrial life, and as member of the Game and Fresh Water Fish Commission for a number of years and two-time Chairman, he is more than a prominent figure in the State's conservation picture.



CECIL M. WEBB

Born in Richland, Ga., Webb attended school in the vicinity of his birthplace and afterward added greatly to his education by personal reading and study. His father was a farmer in earlier years and later operated a chain of stores.

Webb's business career began with a dairy organization, later filling a position as sales manager for a Georgia bakery. In the latter job, he had occasion to come to Florida. It was then that he found an opportunity in the milling trade, with the Eelbeck Milling Company, being promoted steadily until he sold his interest in that company in 1939 to found his own company.

This enterprise of his was the Dixie Lily Milling Company, which now covers every part of Florida, from Gulf to the Ocean, from the Georgia line to the Keys.

In addition to his business activities, Webb has concerned himself for many years in the conservation of wild life. He is particularly interested in game birds and is an honorary member of about 30 hunting and fishing clubs in this State. He was originally appointed to the Game Commission by Governor

Caldwell and re-appointed by Governor Warren, with the latter term ending Jan. 6, 1953.

An enthusiastic hunter, the Commissioner has maintained hunting rights on numerous acres of land for his own use and for that of his friends, and it is conservatively estimated that he spends annually thousands of dollars in the cause of conservation here in Florida. His one pet project has been the supplemental feeding stations for quail.

In addition to conducting these "quail cafeterias," Webb has interested himself in various civic and social organizations, including the Tampa Chamber of Commerce, the Florida State Chamber of Commerce, the American Corn Millers' Federation, and the Free and Accepted Masons. During World War II, he served as a Coast Guard volunteer.

The First District Commissioner is married and has two sons. His wife and sons, both of whom are veterans of the last World War, are all active in the administration of the Milling Company.

#### MILLER JOINER

Since the inception of the Northeast Florida Division of the Game and Fresh Water Fish Commission, there have been two important programs that have attracted the attention of sportsmen, conservationists and the general public. These are "Operation Brushpile" and the swearing in of Deputy Wildlife Officers.

According to reports received from persons through the northeast section of the State, both programs are meeting with a great amount of enthusiasm, and the man responsible for these projects is Miller V. Joiner, of Jacksonville, Commissioner for the Second Congressional District.

Joiner is an ardent sportsman who has been a member of the Commission since 1949. He was appointed in June of that year and was confirmed by the Senate to fill the unexpired term of Milton H. Baxley, which expired in January 1951. He was re-appointed by Governor Fuller Warren and confirmed by the 1951 Senate to serve a full five-year term.

Commissioner Joiner is a native of Jacksonville where he operates a bus and taxicab business. He and his two sons frequently join in hunting expeditions, and he maintains a lodge on Lake Santa Fe at Keystone Heights. He has been in his present line of work for nearly 20 years. Prior to that, he was an automobile representative.

In addition to his work, he has been active in the civic and business life of Jacksonville, as a member of the State Chamber of Com-



MILLER JOINER

merce, Jacksonville Chamber of Commerce, and a member of the American Legion and Veterans of Foreign Wars, having served in World War I.

The Commissioner has devoted much of his time for the past four years in the work of conservation, not only of wildlife but also of the State's other natural resources as well. He is known throughout the State for his many varied activities, particularly those dealing with game and fish resources, for he has always demonstrated a keen interest in furthering fishing and hunting opportunities for Florida.

#### A. F. RICH

As one of the newer members of the Florida Game and Fresh Water Fish Commission, A. F. Rich, of Tallahassee, believes that a continuation of the youth educational program is the main answer to most of the conservation problems facing the State of Florida today.

"If we teach the children of the State the various principles they must follow in order to have pleasant hunting and fishing activities all their lives, then we can get their parents to understand a little bit more about the program that we're



trying to accomplish for the general

public," said Rich.
"For just as the school boy patrol has helped the adults to become more safety conscious on the highways, and just as the Boy Scouts and Girl Scouts have helped to convince the grownups that good moral attitudes are still present in the younger generations, so can our boys and girls teach the older people to obey and respect the game and fish regulations to bring back the bountiful wildlife resources that once gave Florida the name of the "Sportsmen's Paradise!"

Rich, who incidentally is an ardent hunter-he has hunted in almost every State of the Union and in Alaska and Mexico-was born in Bainbridge, Ga., and got his high school education there. He also was a student at the Georgia Military College in the same town.

He was then employed by the Citizen's Oil Company for 13 years, during which time he served as a station manager and supervisor, manager of the Alabama and Georgia territory, and later construction and marine superintendent. He left this organization in 1945 to go into business for himself as a general contractor, which he still operates.

The Third District Commissioner is married and has two daughters, one who is 7, and the other, 11. He was appointed to the Game Commission as a member on Jan. 9, 1952, and is subject to confirmation by the Senate in the 1953 Legislature.

Rich has been hunting since he was 10 years old, and he said that the last hunting season was the best in many years. Reasons for this, he emphasizes, were the good feed crop that nature so plentifully provided for the animals and birds, the good conservation regulations, and better law enforcement, as well as the more conservation-minded attitude of the sportsmen.

#### WALTER WARREN

Walter Warren, of Leesburg, can definitely be classified as an ardent sportsman, for he has fished and hunted in all sections of the State. He can also be classified as an ardent conservationist, for since his appointment to the Game and Fresh Water Fish Commission by Governor Fuller Warren in October 1951, he has vigorously stuck by his guns in various Commission programs. His appointment is subject to confirmation by the 1953 Senate.

He can be called the major proponent of the controversial controlled seining program, for, as he tells it, "I am definitely in accord with the reasoning and thoughts of Chief Fisheries Biologist John F. Dequine on this program." The controlled seining program is a threeyear experimental program designed to improve sports fishing opportunities in six Florida lakes by harvesting surplus populations of panfish and destroying concentrations of roughfish.

Warren is a lawyer in Leesburg. He was born in Palatka where he was educated in grammar and high schools. After his high school graduation he worked in a law office while studying law on his own. He passed the Florida Bar exam in 1936 and moved to Leesburg in 1938. He is married and has four children. two boys and two girls, all of which are still in school.

A leading civic worker in Leesburg, Warren is a member of Kiwanis and Elks, and a former President of the Leesburg Junior Chamber of Commerce.

The Commissioner said, "Considerable progress has been made in conservation in the past several years, but I feel that much more remains to be done." On the changes in the central Florida area, he said that the quail and dove shooting have been getting better and better all the time, with last year one of the finest hunting seasons he remembers in years.

One of his pet projects is a workable plan for hiring personnel. "The next biggest step forward that the Game Commission can take is that of instituting a combination civil service plan for hiring personnel and a merit system for increasing the pay of these employees. Such a program would make for an efficient staff and a more-than-effective program in the protection and restoration of our various resources, said the Commissioner.



WALTER WARREN LEO ADEEB

What will probably be considered one of the best moves on the part of the Game and Fresh Water Fish Commission to get advice from sportsmen in any particular area can be attributed to the newest member of this group, Leo J. Adeeb, of Miami Beach, who took office on Aug. 25, 1952. His term is subject

to confirmation by the 1953 Senate. Adeeb made a motion that the Commission adopt a resolution which authorized each member of the Commission "to select a committee of five citizens in his district to serve without pay as an advisory board for that commissioner in all matters pertaining to Game Commission activities.

From various remarks heard throughout the State on this resolution and on the sportsmen and businessmen chosen for these various boards, it is expected that the various members of the Commission are certain to get the best of advice on various controversial issues taken up by the Game Agencv. These advisers will also serve to give the Commissioner a consensus from people throughout any particular area on any program or activity regarding conservation principles.

Adeeb, an automobile dealer and president of the Miami Beach Flamingoes of the Florida International Baseball League, succeeded E. Harris Drew, West Palm Beach, who resigned as Commissioner to accept appointment to the State Supreme Court.

The Commissioner has also been active in civic and social club work, holding the following offices:

Director and vice-president of the Florida Dealers Association, mem-



LEO ADEEB

ber of the Board of Governors of the Miami Beach Chamber of Commerce, Past President of the Miami Beach Kiwanis Club, Past President of the Young Democrats Club for Dade County, Vice-President of the Gridiron Club, member of the Mayor's Safety Council, member of the President's Council of Miami Beach, and President of the Beach Chevrolet Corporation.

He is also a member of the Rod and Reel Club, Variety Club, Old-Timers Club, Quarterback Club, Miami Shores Country Club, la-Groce Country Club and Knights of

Columbus.

#### BEN McLAUCHLIN

A man who learned the principles of good business the hard way by personal work on his own farm, and a man who was taught the principles of good administration from his military service in the last World War is now applying those same principles to the conservation program of the Game and Fresh Water Fish Commission.

He is Ben L. McLauchlin, a native-born Floridian who calls Fairfield home. After his grammar school and high school education, he entered the University of Florida where he received a B.S. degree in Agriculture. It was here at the University where his leadership first became apparent, with his being selected as vice-president of the student body.

McLauchlin is married and the father of three girls and one boy. The boy was the latest addition, being born during the early part of February 1953.

The Commission director spent

five years in the Army Air Corps during World War II, and became a Lieutenant Colonel of the 388th Heavy Bomber Group, 8th Air Force, before his discharge in August 1945.

Highlights of his business career include the position of agriculture teacher for Sumter County after graduation from the University in 1937 and in 1941 he received the award of Master Teacher for the Southern half of Florida. He is currently engaged in the beef cattle and farming business in Marion County.

He was employed by the Game and Fresh Water Fish Commission in 1949 as supervisor of the Wildlife Officers School, and shortly afterwards was appointed Assistant Director. He was appointed Director in June 1951.

McLauchlin served as Director of the Commission for most of the past biennium, and most of the accomplishments recorded in this biennial report came into being during his period as administrative head for the Game Commission.

#### O. EARLE FRYE

Credit for a good hunting season in Florida can be claimed by no special person or organization, since a lot of various items enter into such success, but a large part of the credit for organizing and putting into effect a progressive game management program—which definitely does have a bearing on future good hunting—can be placed on one man. He is O. Earle Frye, Jr., Assistant Director of the Game and Fresh Water Fish Commission.

It was during the years of 1947 and 1951, while Frye was serving as Chief Wildlife Biologist that a management program including the



BEN McLAUCHLIN



O. EARLE FRYE

acquisition of public hunting rights on a tremendous acreage of private lands was inaugurated. The success of sportsmen in the fields and forests this past shooting season has ascertained that a good management program was instrumental in providing game for this top-notch outdoor sport this year.

Frye, who was born in Tennessee in 1917 and moved to Florida in 1925, first became interested in wildlife as a boy hunting and fishing near Winter Haven. He decided to make a career of conservation when a sophomore at the University of Florida, where he received a Bachelor's Degree in Biology in 1939, followed by a Master's Degree in 1941. He then spent one year of training in the Department of Wildlife Management in Agriculture and Mechanical College of Texas.

The Assistant Director enlisted in the U. S. Navy in June 1942 and became a naval aviator. His two years of sea duty were spent in antisubmarine warfare as a torpedo plane pilot aboard aircraft carriers in the North Atlantic. He held the rank of Lieutenant, Senior Grade and received the Air Medal with one Gold Star, and the Presidential Unit Citation before being released from active duty in January 1946.

After his Military service, Frye was employed by the Florida Game Commission to do research work on the bobwhite quail. In 1947 he became Chief Wildlife Biologist and spent the following four years in game management work. He was then appointed Assistant Director in 1951. He has written numerous technical and non-technical articles about wildlife and game management programs for many different publications.

## For Children Only

By CLYDE R. REVELS, JR.

An educational program has its most lasting effects upon children, particularly those from the first to the sixth grades, for it's in this period of life that their opinions on a variety of matters are moulded, to become a true part of their thinking for the rest of their lives.

The Florida Game and Fresh Water Fish Commission realizes this and an extra effort has been put forth by all personnel in the fields and in the offices, but mostly by the Division Education Officers, to make school children a vital part of their

everyday contacts.

Perhaps the most far-reaching of all activities carried on with children is that of the formation of Junior Conservation Clubs throughout the entire State of Florida. For it is here that the thought of conservation-education is planted and tended before finally blossoming out as a new convert to the field of saving and restoring our natural resources.

In an atmosphere of recreation as a member of these youth clubs, the youngsters are also taught the finer points of conducting themselves as "Guardians of the Outdoors," pledged to fulfill their part in seeing that no species of wildlife suffers the fate of passenger pigeons.

Some of the many projects these clubs engage in are the trapping and releasing of quail, roughfish control work, control of water hyacinths, boating, swimming and shooting safety, proper care of equipment, predator control, and study of game and fish rules and regulations.

Another facet of this school children program includes the making of talks and showing of movies to either individual classes or combined groups, the sending of pamphlets and other literature on conservation for use in the classroom, the conducting of fishathons for children.

and on-the-spot lectures on forestry, hatcheries, food and cover plantings for game and camping trips.

One of the newer methods in game and fish conservation-education is that of bringing the animals and fish to the schools in a traveling "Zoo." The Commission has just recently purchased a new trailer, carrying 22 cages and tanks of birds, animals, and several species of snakes and fish, which will be sent to all schools in Florida during the next few years. The fair manager gives a short talk on conservation before the youngsters file around the trailer to view the various species of wildlife. Signs which identify the animals also tell various means of assuring their survival and increase throughout future years.

Under discussion for future projects are the following four programs, all designed to inculcate our boys and girls with the principles

of good conservation:

A series of slides on birds, animals, fish and Commission activities with a projector and a lecture to go with each set of slides; a new set of films; wildlife calendars which will carry a conservation message on it for each day of the year; more colorful pamphlets to attract the attention of the youths: distribution of a poster with the "Conservation Pledge" on it for every school room in Florida; and a conservation essay contest, with suitable awards, for the various schools.

The time of the game and fish law violator is drawing short, for with the advent of a truly functioning school conservation-education program will come a new generation of persons concerned with and pledged to do something about the disappearance of our natural resources. You can't teach an old outlaw new tricks, but we can teach our children good conservation practices.









## The "Eyes" of the Northeast Division

Our two-place seaplane, based at Keystone Heights, has served as a sharp pair of eyes in a constant search for game law violators over a gigantic area that could not be as efficiently covered, day after day, by any other mode.

Records disclose that our plane operated in the air for a total of 824 hours at an average speed of 90 miles an hour. This means that our pilot covered 74,160 land miles during his annual operation in the air. His ordinary visibility from the air covers 256 square miles, so it is only a matter of reckoning to determine the gigantic area that came under his surveillance.

During his tours in the air, our pilot is able to maintain constant radio communication with most Game and Fish Commission radio stations regardless of their location in the state. In addition, he can communicate with scores of our radio - equipped automobiles and transmit important messages to them although they are in remote

parts of Florida. The alertness of our pilot has resulted in reporting numerous forest fires during the year—an added service that likely has resulted in saving countless acres of valuable wooded sections.

It is interesting to note that our pilot was able to continue his law enforcement efforts even when weather or other conditions grounded his airplane. Our records show that he traveled a total of 35,000 miles in his state vehicle in his patrol of various rivers, lakes and forests in addition to his flying activities.

OTHER NORTHEAST ACTIVITIES (Continued from Page 9)

During the year our wildlife officers carried on a program of strict and efficient enforcement against illegal transportation of fish, illegal taking of game, and the use of illegal devices for taking fish in all counties of the Northeast Division.

Quail restocking was carried on

successfully in Alachua, Bradford, Union, Duval, Clay, Nassau, Gilchrist, Madison, Lafayette, Suwannee, Columbia, Hamilton, and St. Johns counties. Due to excellent public relations and good will of outstanding sportsmen in Dixie, Taylor, and Baker counties, we have received the type of cooperation that resulted in efficient protection of fine habitat and game supply that already is provided in these sections.

Many of the facts and figures covering the activities of our divisional wildlife officers are extremely interesting. Our records disclose that during the year our officers traveled a total of 471,097 miles while performing their official duties. During that period they made 385 arrests and checked 18,638 licenses. They spent 75,973 hours on land patrol in addition to 8,055 hours of water patrol. Their presence in court required 641 hours, and their attendance at meetings with clubs and schools accounted for 971 hours.

Their assistance in game management activities accounted for 1,236 hours, and 1,101 hours were given to fish management activities. During the year our officers talked to a total of 9,053 persons regarding wildlife conservation and rendered 348 hours to community service. They investigated 308 complaints and sold 315 commercial licenses.

Our officers devoted 1,368 hours in maintaining and making minor repairs to their state equipment and spent 1,028 hours in rendering assistance to the public. Meanwhile, their efforts and alertness resulted in the confiscation of 26 illegal nets and 295 fish traps.

#### FROM THE EVERGLADES

(Continued from Page 15)

Furthering the cause of sound game and fish management and conservation, 17 Junior Conservation Clubs were organized in this Division. In addition, all newspaper editors, City, County, and State Officials, Chambers of Commerce, schools, civic clubs, radio stations, and sportsmen's clubs in this area have been contacted by personnel of the Everglades Division.

Counties included in the Everglades Division are Lee, Charlotte, Glades, Collier, Hendry, Monroe, Broward, Dade, Palm Beach, and Martin.

# Opening and Closing of Seasons

By O. EARLE FRYE

One of the biggest problems annually facing the Game and Fresh Water Fish Commission is the establishment of sound hunting and fishing regulations. The Commission's responsibility in this matter is one principally of enabling the maximum utilization of harvestable supplies of game and fish without danger of depleting or seriously interfering with the recovery of the population.

Probably the single greatest headache of a hunting and fishing regulatory board of today is the difficulty of liberalizing hunting and fishing regulations or at least the difficulty of obtaining public and sportsmen's approval of such liberalization. It is much easier to put on additional restrictions than it is to remove ex-

isting ones

This attitude on the part of the hunter or sportsmen is understandable enough since for many years the conservation minded sportsmen have been fighting for stricter regulations to preserve the ever diminishing supplies of game and fish. He has been thinking in terms of saving rather than utilization. It is not difficult to understand then why he views with alarm any move to liberalize regulations—even though such liberalization will mean more hunting and fishing opportunities for him. This attitude on the part of the sportsmen is highly commendable when it is accompanied by a realistic consideration of the facts in any ease. Only when such facts are obscured by the emotional

facts are obscured by the emotional appeal of saving game and fish is damage likely to result to the entire conservation effort.

The most conservation matters in the day have to do with his of these is the necessity of the entire control of these is the necessity of the entire control of these is the necessity of the entire control of the entire conservation and the entire conservation efforts. The entire control of the entire conservation efforts are conservation efforts and the entire conservation efforts are conservation efforts. First of the entire conservation efforts are conservation efforts and the entire conservation efforts are conservation efforts. First of the entire conservation efforts are conservation efforts are conservation efforts are conservation efforts. First of the entire conservation efforts are conservation efforts are conservation efforts are conservation. First of these is the entire conservation efforts are conservation efforts are conservation efforts are conservation. First of the entire conservation efforts are conservation effort

The other controversial fishing issue and quite possible the most important issue at present facing the Game and Fresh Water Fish Commission is the matter of controlled seining and sale of pan fish.

In this case it is generally agreed by fish management experts and there is a great deal of scientific evidence to indicate that a controlled seining program would be beneficial to sports fishing. However, public opposition to such a program in certain sections of the State is extremely powerful, particularly to the idea that such seining should be done by commercial fishing interests. This condition is aggravated by the long time feud between sports and commercial fishing interests.

In the former of the above cases public opinion is opposed principally to a liberalization of fishing regulations. In the latter another factor enters—this is the presumed conflict between commercial and sports interests. Assuming that in both the above cases the scientific evidence is correct, the Commission is faced with this major question: Is the good that would result from following the scientific recommendations worth the damage that might be done the overall conservation effort by unfavorable public opinion?

Probably the three most controversial hunting questions in Florida at present are: the prohibition of shooting turkey hens; the propriety of staggered days versus continuous hunting; and the question of an early dove season. There is little doubt that were it possible to properly enforce a closed season on turkey hens the danger of over shooting the turkey during the legal season would be eliminated. The difficulty in such a regulation lies in the apparent inability of the average hunter to distinguish hens from gobblers, and the consequent impracticability of enforcing regulations prohibiting the taking of turkey hens. It is interesting that in the district in the state where the turkey gobbler only regulation has been in effect for the longest period, the regulation is very popular and would be difficult to remove. Also pertinent is the question as to whether or not the insurance against over shooting is worth the loss in take-home game resulting from prohibiting the taking of hen turkeys.

The question of staggered day versus continuous hunting is one whose answer should be left almost entirely to the expression of the wishes of the sportsmen. There is little evidence that staggered days have an appreciable effect on game killed.

The matter of an early season for doves is a problem that has plagued the Commission for many years. Not until the last two or three years, when results became available from a research program conducted by Florida in conjunction with other southeastern states, has there been adequate information about doves upon which to base regulations. The dove regulation problem arises from the fact that a large flight of doves enters Florida in September and October and this flight offers the only shooting that some sections of the state are able to get. Inasmuch as Federal regulations prohibit a section of the state having different dove regulations from another section it became necessary for the Commission to hold an early dove season in October and a later one in December in order to accurately distribute the available dove hunt-

The State-wide split season was first put into effect in the fall of 1952 and proved generally satisfactory. The biggest objection arose from the fear that other game would be killed by hunters being allowed in the fields with guns during the October dove season. Some such game was killed by dove hunters but by and large the amount of game so killed was negligible with very few reports of game violations. If a great deal of game other than doves had been killed in the October season it would have been impossible to have had what was probably the best hunting season in Florida in many years. Similarly the early season did not seem to appreciably damage the dove population since more doves were reported in the December 1952 shoot than have been reported in a number of years.

One of the most pronounced improvements in regulations made in Florida in recent years has been the establishment of generally uniform hunting seasons throughout the State. This resulted to a great extent from the almost universal demand for uniform seasons.

(Continued on Page 35)

#### GAME MANAGEMENT (Continued from Page 19)

of pasture improvement operations, construction of checking stations and operation of the controlled hunts.

On the Palm Beach Area an old project was re-opened to permit the construction of approximately 32 miles of fence. This has been

largely completed.

With the rapid expansion in the number of management areas, it was decided to initiate a master project covering developmental work on several of them. There are at present eight areas, totaling 851,000 acres, carried under this project. All have now been posted. Much work has been done in bridge, road, and fence maintenance, in establishing food plots, conducting controlled burning, constructing checking stations, and conducting controlled hunts. Five of the areas operated

under the master project were open to controlled hunting in both the 1951 and 1952 seasons. In 1951, 575,000 acres were hunted a total of 9029 man-days. The man-day figures for 1952 are not yet available, but through January 1953 the total Public Hunt Area stamp sales were 10,013 as compared with 9,710 in 1951. Kill results for the two years are shown in Table 2.

Land Acquisition

Probably that part of the game management division's program which results in the greatest direct

Table 2. KILL RESULTS ON THE FLORIDA WILDLIFE MANAGEMENT AREAS

|                               |      |       |           |           | 1001-02 | and 13 | 02-00 |             |      |      |      |             |       |      |
|-------------------------------|------|-------|-----------|-----------|---------|--------|-------|-------------|------|------|------|-------------|-------|------|
| Anv                           | D    | uck   | 0         | )eer      | Tur     | key    | Qu    | nail        | D    | love | Squ  | irrel       | В     | ear  |
| Area 19.                      | 1951 | 1952  | 1951      | 1952      | 1951    | 1952   | 1951  | 1952        | 1951 | 1952 | 1951 | 1952        | 1951  | 1952 |
| Apalachicola                  |      |       | 4         | 12        |         |        | 12    |             |      |      |      |             |       | 6    |
| Osceola<br>Ocala              |      | 53    | 15<br>345 | 28<br>501 | *****   | 1 (49) |       | 270         |      | 32   |      | 316<br>2408 |       | 1    |
| Gulf Hammock                  |      | 439   | 35        | 64        | 65      | 115    |       | 370<br>76   |      | 32   |      | 3511        | 1     | .4   |
| romoka                        |      | 190   | 00        | 29        | 0.0     | 16     |       | 8           |      |      |      | 109         |       |      |
| Farmton                       |      | 11221 | 23        | 37        | 25      | 85     |       | 128         |      |      |      | 645         |       |      |
| Steinhatchee<br>J. W. Corbett |      | 82    | 38        | 77        | 12      | 21     | 464   | 76          |      | 2    |      | 1500        |       |      |
| Hendry                        |      | 36    | 33        | 17        | 203     | 283    | 404   | 1156<br>226 | )    | 1    |      | 186         |       |      |
| Collier                       |      | 2 5   | 28        | 87        | 430     | 697    |       | 1021        |      | 140  |      | 258         |       |      |
| Avon Park                     |      |       |           | 2         | 4       | 31     | 1306  | 1740        |      | 4    |      | 52          |       |      |
| Fisheating Creek              |      | 157   |           | 5         |         | 268    |       | 5307        |      | 128  |      | 638         |       | *    |
| Sumter<br>Charlotte           |      |       |           | 2         |         | 12     | 3000  | 94<br>3300  |      |      |      | 1674        | 2 yli |      |
| Eglin                         |      |       |           | 1500      |         |        | 3000  | 3300        |      |      |      |             |       |      |

Table 3. WILDLIFE MANAGEMENT AREAS IN FLORIDA

|   | ACR   | EAGE                                 | Principal Game  |   |  |  |
|---|---|--------------------------------------|---|---|--|--|
| Name  | Open to<br>Managed<br>Hunt                      | Closed<br>to<br>Hunting              | Now Available<br>for Hunting  | Principal Ownership   |  |  |
| Eglin Air Force Reservation     Blackwater Wildlife Management Area     Roy Gaskin Wildlife Management Area   | 410.000   | 50,000<br>85,000<br>110,000          | Deer.   | U.S. Air Force<br>Florida Forest Service<br>International Paper Company<br>St. Joe Paper Company  |  |  |
| 4. Apalachicola Wildlife Management Area<br>5. Steinhatchee Wildlife Management Area  | 100,000<br>225,000                              | 98,500                               | Deer, Bear.<br>Deer, Turkey, Squirrel.  | U.S. Forest Service Buckeye Cellulose Corporation Consolidated Naval Stores Hudson Pulp & Paper Company Howell Estate                                   |  |  |
| 6. Osceola Wildlife Management Area<br>7. Gulf Hammock Wildlife Management Area<br>8. Ocala Wildlife Management Area<br>9. Tomoka Wildlife Management Area  | 65,000<br>100,000<br>185,000<br>50,000          | 42,000<br>20,000<br>90.000           | Deer, Bear<br>Deer, Turkey, Squirrel.<br>Deer, Squirrel<br>Deer, Turkey.                                    | U.S. Forest Service Patterson, McInnis Lumber Copany U.S. Forest Service Hudson Pulp & Paper Company Tomoka Land Company                                |  |  |
| 10. Farmton Wildlife Management Area<br>11. Sumter Wildlife Management Area<br>12. Richloam Wildlife Management Area<br>13. Avon Park Wildlife Management Area<br>14. Charlotte Wildlife Management Area<br>15. Fisheating Creek Wildlife Management Area | 50,000<br>35,000<br>38,000<br>57,000<br>100,000 | 48,000<br>70,000<br>5,000<br>175,000 | Deer, Turkey<br>Deer, Turkey, Squirrel<br>Deer, Turkey, Squirrel, Quail<br>Quail<br>Turkey, Quail, Squirrel | Deering Properties Cummer Sons Cypress Company U.S. Soil Conservation Service U.S. Air Force Game & Fresh Water Fish Commission Lykes Bros. Corporation |  |  |
| 16. J. W. Corbett Wildlife Management Area  | 45,000  | 52,000                               | Deer, Turkey, Quail   | Bee Branch Cattle Company<br>Game & Fresh Water Fish Commission   |  |  |
| 17. Hendry Wildlife Management Area   | 50,000  |                                      | Deer, Turkey  | Indian Trail Ranch, Inc.<br>J. W. McDaniel  |  |  |
| 18. Collier Wildlife Management Area.   | 300,000   | 50,000                               | Deer, Turkey  | Bob Roberts<br>Collier Company  |  |  |
| 19. Everglades Wildlife Management Area   | 720,000   |                                      | Waterfowl   | Lee Cypress<br>Central and Southern Florida Flood   |  |  |
| 20. Olustee Wildlife Management Area  |   | 100,000                              |   | Control District<br>Nat'l Turpentine & Pulpwood Co.<br>Southern Resin & Chemical Company<br>William Knabb   |  |  |

benefit to the public is its land acquisition work. As a consequence of its efforts to make reasonably good hunting readily available, Florida now has one of the outstanding public hunt programs in the country. Particularly important is the amount of private land which has been acquired as wildlife management areas. Florida's leadership in this field is assisted by a number of factors. For example, land ownership in Florida probably lends itself to such a program to a greater degree than in other southeastern states due to the high percentage of land in cattle ranch or timber holdings. Associated with this factor and without question the primary reason for the success of Florida's public hunting program is the fact that many of the big land holdings in Florida are in the hands of realistic, civic minded concerns or individuals who recognize the problem of supplying hunting for the average man and are willing to do their part toward solving it. Also of some significance is the fact that Florida is more or less a pioneer state and in many sections the average man does not accept fencing and posting against hunting of lands that until very recently were wide open.

Through a public hunting agreement with the Commission, the landowner retains complete control over his land and its particular resources that are unquestionably his private concern. At the same time he is relieved of the headaches accompanying the responsibility for a resource, fish and game, that traditionally belongs to the people.

The landowner receives such tangible benefits as fencing, fire protection, and assistance in the prevention of trespass, but by far his greatest benefit is the general good will resulting from his contributing his land for public hunting purposes. In all cases the placing of an area under cooperative wildlife management has resulted in reduced burning, fence cutting, timber theft, and cattle theft. The program has been particularly effective in stopping trespass of a malicious type frequently brought about by public resentment against the landowner fencing his property.

Similarly, on all management areas previously suffering from overshooting, there has been a steady increase in deer and turkey in spite of the fact that the areas are still open to hunting. Three factors are believed to be largely responsible for such increases: improved protection against illegal hunting resulting from increased

law enforcement personnel assigned to such areas; improved game habitat resulting from food planting and maintenance of turkey and quail feeders, as well as pasture improvement and controlled burning designed specifically to benefit game; and finally but possibly of greatest importance—improved public attitudes.

Table 3 summarizes the information on Florida's wildlife management areas. All except Eglin, Steinhatchee, Gulf Hammock, Ocala, Avon Park, Charlotte, and part of the Corbett were activated in the past two years.

In summary it might be said that during the past two years the game management division has been active in research, development, and land acquisition. The program has been sound and progressive, the staff small but well qualified. Results have been outstanding.

### INFORMATION AND EDUCATION

(Continued from Page 24)

ficials, and townspeople in the above towns. We have definitely decided to continue these fishathons during the next few years because they are one of our best public relations activities. These affairs have become so popular that we intend to honor as many requests as possible from many of the smaller cities in the state during the coming years.

We have also set up numerous special exhibits during the past two years. Whenever there has been a conflict in dates of county fairs, we have tried to send our exhibit to the fair with the earliest request so that our schedule was more or less maintained on a first-come, firstserved basis. In addition we have displays at other fairs and at many special conventions that are meeting in the state. These groups include the National Rifle Association meeting in Jacksonville, the Outdoor Writers Association convention in Miami, the Florida State Fair in Tampa, and several of the fairs having permanent buildings.

It is hoped that the budget for the next several years will give the Information and Education division enough funds to go into the publicity and public relations field much more than it has during the past biennium. We have had innumerable requests for films to be used in television stations and for new films to be shown to various organizations throughout the State. Our future

plans include the printing of several new booklets and pamphlets depicting the various game commission activities, a slide projector and a series of slides for each of our education officers, and an increased number of pictures and mats to be sent to newspapers and magazines in the State, as well as prepared radio scripts for all radio stations in Florida. We are also going to follow through with our Junior Conservation program, and make up several new wildlife displays to be used instead of our temporary displays at fairs and schools. We are anxious to get into the poster picture more than we have in the past with the expectation that multicolored pictures of animals, birds, and fish, will be obtained and distributed to all the schools of the State of Florida.

Another project slated for the future includes the compilation of a hand book for members of the Commission. The handbook will cover all activities of the Game Agency and will serve as an up-to-date reference guide for both old and new personnel.

We are continuing our efforts to get the State Department of Education interested in publishing a book authored by commission personnel to be used in conservation courses in both grammar and high schools.

### OPENING AND CLOSING SEASONS

(Continued from Page 33)

A state-wide uniform season cannot be expected to be perfect for all areas of the State, but it certainly is superior to the hodge-podge of regulations that once existed in Florida.

Another important development in conservation regulations was the deer and turkey tagging system that was begun in the fall of 1951. This system was widely backed by sportsmen and seems to have met with almost complete approval of the public. This was the first major step toward actually enforcing season's bag limits for deer and turkey.

In summary: The regulations of hunting and fishing is one of the most important functions of the Game and Fresh Water Fish Commission. Sound regulations are essential to any progressive conservation program. Such regulations must be based on two equally important factors—the best scientific data available and a careful consideration of public opinion.









# Florida WILDLIEE

By JACK GRANT

Florida Wildlife Magazine, published by the Game and Fresh Water Fish Commission, features articles, true story adventure material and regular columns on outdoor subjects such as hunting and fishing, as well as conservation activities of the Commission.

The magazine has grown in popularity not only throughout Florida, but in many of the other 48 states, as is evidenced by the large increase in subscription in the past year.

The first of June, 1952, the publication was contracted in an attempt to put it on a professional basis. While the familiar characteristics were retained, an effort was made to secure the best writers obtainable to inform and entertain our readers with diversified material of interest to sportsmen and conservationists.

This year the subscription rate was raised from \$1.00 to \$2.00 a year, and instead of suffering a loss of circulation, the Florida Wildlife Magazine now has approximately

30,000 paid subscribers, of which about 10,000 are outside the state.

Editors have attempted to gather material for the magazine that would be of interest to the entire family. We introduced the column "Uncle Rufus" for Juniors and it has stimulated interest in the magazine and has given us a larger percentage of readers per issue. For the women . . . there is a well balanced amount of material, including a cooking column, and in the January issue, fiction was introduced, which was well received.

The magazine has an efficient staff including those handling circulation, advertising and mailing. An artist has been added to the staff, giving the magazine distinction.

In every way, we feel that Florida Wildlife is a well rounded magazine. The number of pages has been increased from 48 to 64 and we have tried to fill every page with the best in outdoor recreation reading. At the rate in which new subscriptions are now being received, the circulation should pass the 60,000 mark.

# GAME AND FRESH WATER FISH COMMISSION

# ... Administration

#### By O. EARLE FRYE

The overall Administration of the Game and Fresh Water Fish Commission is delegated to a Director appointed by and to serve at the pleasure of the Commissioners. Assisting him and directly under his supervision are an Assistant Director, a Secretary to the Commission, personnel working on special assignments such as special investigators, and all staff officers. This latter group consists of the Business Manager, State Coordinators of Game, Fish, Information and Education, and Communications, and the five Division Directors.

The lines of Administrative authority are as depicted in the attached diagram. Each of the personnel are directly responsible to the Director. This diagram shows that the Director is immediately responsible to the Commission, Heads of Departments, Staff Officers, or on the other hand responsible to the Director. It is the Staff Officers' duty not only to attend to their particular administrative duties but to keep the Director, and

through him the Commission, informed as to the details of the activities in his branch of the administrative organization and of pertinent information relating to his particular field of endeavor.

The Division Directors are responsible for all activities within the geographical area composing their Division. These include law enforcement, communications, game and fish management, Information and Education activities and budgetary matters. Activities of a technical nature in any of the above fields are to be supervised jointly by the State Coordinator of the appropriate function and the Division Director. Any difference of opinion regarding such activities will be settled by the Director or the Assistant Director. Answerable to the various staff officers are additional sub-supervisory personnel, for example: To the Business Manager-the State Property Officer, Bookkeeping and Auditing Personnel: to the Game and Fish Coordinators-the leaders of Federal and

State-wide projects, such as the hyacinth control program, controlled seining, deer and turkey restoration, and water fowl and morning dove research and management projects; to the Coordinator of Information and Education - state radio programs and the state coordinator of Junior Conservation Clubs: to the Division Directors—the division fish and game managers, Information and Education Officers, and Area supervisors. Each of the supervisory positions are in turn responsible for other personnel — for example: Area Supervisors are responsible for law enforcement activities in from two to four counties in a Division and is directly responsible for the activities of law enforcement personnel in such areas.

All of the lower level supervisory personnel actually participate in carrying out the work concerned. For example, area supervisors spend a great deal of their time on actual law enforcement as well as supervision of law enforcement in their respective areas. The degree to which any individual can participate in the actual work depends, of course, upon the extent of his administrative duties. The further up the administrative ladder he goes the less he is able to participate in the work he is supervising.

One of the most important duties of the Director is the collection and assimilation of information from the various staff members for presentation to the Commissioners for their use in establishing overall policies of the Commission. It is his very definite responsibility to keep the Commissioners informed as to activities in the various phases of conservation endeavor and as to public opinion regarding specific issues. This can be accomplished by frequent personnel contacts with individual Commissioners and by means of periodic written reports covering Commission activities.

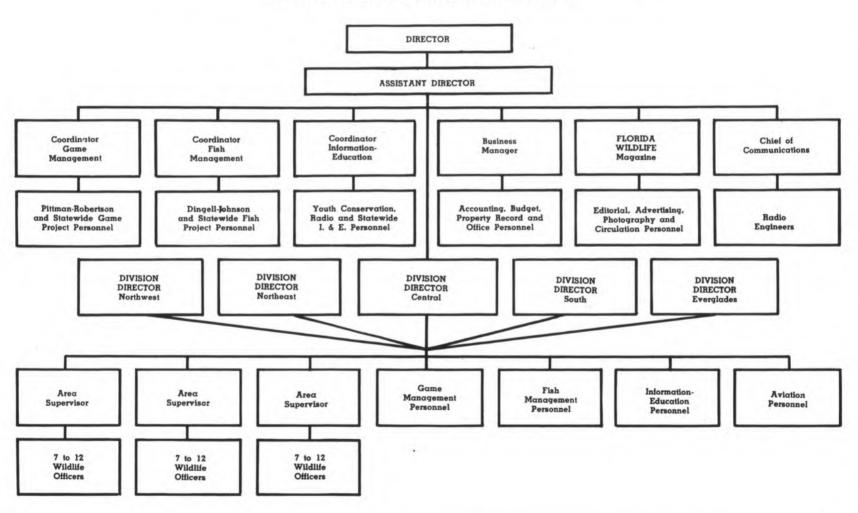
Here the director assists in organizing the Junior Conservation Club League



### FLORIDA GAME AND FRESH WATER FISH COMMISSION

#### ADMINISTRATIVE SETUP

Five Commissioners—One appointed from each of five Congressional Districts by Governor under Constitutional Amendment



#### FISH MANAGEMENT

(Continued from Page 17)

this program, which promises to reclaim many acres of formerly fine fishing waters.

#### Fish Population Control

During 1951 rough fish control activities were conducted on a number of central and southern Florida lakes. Essentially, these activities included the operation of stateowned haul seines for the purpose of reducing rough fish and making studies of the fish populations. All seining was conducted under the supervision of a Commission fish management technician by experienced commercial fishermen who received three-fourths of the proceeds from the sale of marketable rough fish - principally catfish - as compensation. The names of the waters and the counties in which the operations were conducted are listed below.

WATERS IN WHICH ROUGH FISH CONTROL OPERATIONS WERE CONDUCTED DURING 1951.

| CONDUCTED DUR                  | ING 1951.      |
|--------------------------------|----------------|
| Name of Waters                 | County         |
| Name of Waters<br>Tsala Apopka | Citrus         |
| Lake Francis                   | Highlands      |
| Lake Red Beach                 | Highlands      |
| Lake Stearns                   |                |
| Lake Istokpoga                 | Highlands      |
| Lake Thonotosassa              | Hillsborough   |
| Lake Wilmington                | Indian River   |
| Lake Beauclair                 | Lake           |
| Lake Harris                    | Lake           |
| Lake Eustis                    | Lake           |
| Lake Weir                      | Marion         |
| Lake Ivanhoe                   |                |
| Little Lake Ivanhoe            | Orange         |
| Lake Eola                      | Orange         |
| Lake Concord                   | Orange         |
| Lake Davis                     | Orange         |
| Lake Pickett                   | Orange         |
| Lake Apopka                    | Orange         |
| Lake Johns                     | Orange         |
| Lake Jessup                    | Seminole       |
| Lake Monroe                    |                |
| Lake Harney                    | Seminole       |
| Withlacoochee River            |                |
| Lake Panasoffkee               |                |
| Lake Reedy                     |                |
| Lake Hollingsworth             |                |
| Lake Parker                    |                |
| Lake Hunter                    |                |
| Lake Rosalie                   |                |
| Lake Ashby                     | Volusia        |
| Move than 200 000 m            | nunds of rough |

More than 300,000 pounds of rough fish—gars, bowfin (mudfish), gizzard shad, suckers, and catfish were removed in these operations. Other fish population control activities are discussed under the section of this report entitled "The Controlled Seining Program."

#### The Controlled Seining Program

In February, 1952, the Commission approved an experimental program of controlled seining on six

large lakes, after such a program had been recommended by the biological staff. The lakes chosen were Lakes George, Crescent, Okeechobee, Harris, Eustis, and Reedy, all of which had been the site of previous biological surveys. The objectives of the program are to attempt to manipulate the fish populations of the lakes toward a composition more favorable to the sport fisherman, particularly for bass. Surveys had indicated that bass made up only from one to eight percent of the entire weight of the adult fish populations and that the removal of other species which competed for the same food and space would increase the abundance of the bass and improve bass fishing.

Recommendations by Florida biologists that such an experimental program be adopted had been endorsed by a panel of nationallyrecognized fish management scientists in 1951.

Essentially, the experimental program is based on findings of fish management specialists in Florida and other southern states which have shown that fish may be managed much the same as are other annual crops. It is well established that the capacity of a given area of water is limited in its ability to produce and support certain poundages of fish, just as given areas of pastureland will support certain quantities of beef, or as an acre of farmland will yield only so many bushels of corn. Intensive management of water areas, using practices similar to those used in agricultural crops has been found to increase the production of desired species of

Among the practices used to improve fish production are clearing, planting, fertilization, cultivation and thinning, and harvesting. The first three — clearing, planting and fertilization — have been found very successful in the management of

small (under 50 acres) Florida lakes. They are, however, too expensive or impractical for use on the larger waters which provide the bulk of Florida's freshwater fishing.

Cultivation, thinning, and harvesting—also practiced successfully in smaller waters—can be used in many of the larger shallow lakes. These practices are applied through the use of seines and the removal of certain amounts of fish.

Cultivation of the experimental lakes, for example, involves the removal of garfish, bowfin (mudfish), suckers, gizzard shad, and catfish—"weed" species that compete for food and space with more desired fish and are not sought extensively by sport fishermen. Seining of these so-called "rough fish" has been followed by improved angling in several Florida lakes.

Thinning of desired species such as the bluegill, shellcracker, and crappie—also of proven value in smaller waters—is practiced to increase the growth rates and to produce a faster-growing, better "biting" fish for the angler. At the same time, large amounts of these species which are surplus to the requirements of sport fishermen are processed under state supervision and sold as food.

Research in Florida and elsewhere has indicated that less than five percent of the total populations of bream and crappie present in the larger lakes are taken by fishermen. The short life cycle of these species -usually not over two or three years-and the small catch taken by anglers results in a loss of their use as food, unless they are harvested by the seines. While accurate data are not yet available, it is estimated that the rate of harvest by seines will not exceed 50 percent of the total annual crop. It is not anticipated that this removal of some 50 percent will effect the quantity, but that it will increase the quality of

#### MONTHLY POUNDAGES OF BREAM AND CRAPPIE TAKEN COMMERCIALLY FROM FLORIDA FRESH WATERS DURING 1952\*\*

| Month     | Bream     | Crappie |
|-----------|-----------|---------|
| April     | 112,109   | 15,325  |
| May       | 32,999    | 3,781   |
| June      | 8,416     | 1,928   |
| July      |           | 45,909  |
| August    |           | 93,299  |
| September |           | 115,797 |
| October   |           | 151,450 |
| November  | 170,553   | 202,298 |
| December  |           | 292,231 |
| Totals    | 1,472,561 | 922,018 |
|           |           |         |

<sup>\*\*</sup>Subject to minor revision.

fish caught by anglers. The expected effect of harvesting these surplus fish may be compared with caring for a lawn—regular mowing strengthens the roots and produces a thicker, more luxuriant growth.

Inasmuch as the largemouth bass is Florida's most sought after game fish, its importance in the recreational and economic picture of the State is considered greater than that of any other single species. That this is particularly true in the areas included in the controlled seining program has been verified by surveys involving personal interviews and questionnaires covering thousands of sport fishermen. One of the major objectives of the program is the improvement of fishing for bass, through the removal by supervised seines of certain amounts of other species, simultaneously accomplishing the needed cultivation. thinning, and harvesting.

Under this program, haul seines up to 1,600 yards in length are used by experienced commercial fishermen to remove all fish taken with the exception of bass and pickerel. which are returned to the water alive. One Commission employee accompanies each seine and records complete information on the fish taken, as well as making certain that the fishermen abide by the regulations. In addition to studies of the fish populations made through the use of seines, investigations are made of the age and growth rates of the fish, food habits and reproduction, and records of the catch by sport fishermen are kept. The studies are so planned to determine the changes in the fish population brought about by the seining, as well as to measure the effects of the program on the sport fisherman's catch, over a three-year period. The seining can be slowed or halted if evidence of over-fishing is found.

Funds to support the supervision and research activities are obtained through a poundage fee collected from the commercial fishermen, and some of the research activities are financed in part through the Dingell-Johnson Federal Aid to Fisheries Act. All bream and crappie taken are processed under the supervision of Commission personnel, and each individual fish is tagged with a destructible metal seal before it can be sold. Receipts from the fees collected totalled \$18,613.94 in excess of costs at the end of December 1952.

Work on Lakes Harris, Eustis, and Reedy started in April 1952, and in the other lakes in July. Up to the end of December, 773,260 pounds of bass had been taken and returned to the water with mortality rates of less than one percent; 2,394,579 pounds of bream and crappie, and 735,612 pounds of catfish were sold for food at an estimated wholesale value of nearly one million dollars: and 2,325,897 pounds of gars, gizzard shad, and other rough fish were destroyed or given away for use as fertilizer. A local court injunction, which delayed the operations in Lakes Harris and Eustis for about

three months, was dissolved by the State Supreme Court.

While no valid conclusions can be drawn at the end of this biennium, initial results are encouraging. Fishing camp operators on Lakes Harris, Eustis, and Okeechobee and many fishermen have reported improved catches of bass since the start of the program. It is hoped that the program can be continued through the entire three-year period, so that the answers to this controversial question can be definitely determined.

Fish Management Bulletin No. 1, Florida's Controlled Seining Program, was prepared and published to explain the purpose and operations of the program in detail. Copies of this bulletin are available from the Tallahassee office of the Commission.

#### Commercial Fisheries

During recent years, an effort has been made to collect and analyze information concerning the economics and effects of various freshwater commercial fisheries. The principal freshwater fishes taken are the southern channel catfish, the white catfish, the speckled bullhead, the yellow bullhead, and a few other species from limited areas, as explained in the section of this report on the Controlled Seining program. Trotlines and wire traps probably account for the greatest percentage of catfish taken, while seines, pound nets, gill and trammel nets, wooden slat baskets, and hook and line account for the remainder.

Holders of wholesale freshwater fish dealers' licenses are required to report the poundages of fish purchased monthly. These reports are summarized in the adjacent table.

In addition to catfish, monthly statistics on the poundages of bream and crappie taken during the 1952 Controlled Seining Program are tabulated. The term "bream" includes the bluegill, the shellcracker (redear), and a few other miscellaneous sunfish; crappie are the black crappie, or "speckled perch." These totals represent the legal commercial take of bream and crappie for the period covered.

Estimates based on the number of commercial fishing licenses sold and other data indicate that at least 3,500 residents receive a major portion of their annual income from freshwater commercial fishing, plus approximately 1,000 part-time or seasonal workers.

#### MONTHLY POUNDAGES<sup>1</sup> OF CATFISH<sup>2</sup> REPORTED BY LICENSED WHOLESALE FRESHWATER FISH DEALERS FOR 1951 AND 1952

| Month<br>January                       | 1951           | 1952           |
|--|----------------|----------------|
|  | 1,141,376      | 706,706        |
| February                               | 1,288,820      | 654,344        |
| March                                  | 1,167,094      | 596,468        |
| April                                  | 779,687        | 591,766        |
| May                                    | 586,991        | 494,685        |
| June                                   | 516,044        | 364,930        |
| July                                   | 489,071        | 438,460*       |
| August                                 | 550,809        | 510,108*       |
| September                              | 602,841        | 477,470*       |
| October                                | 709,633        | 617,184*       |
| November                               | 833,499        | 860,764*       |
| December                               | 720,335        | 816,931*       |
| Totals                                 | 9,386,200      | 7,129,816      |
| Estimated wholesale value <sup>3</sup> | \$1,595,654.00 | \$1,212,068.72 |

\*A few dealers' reports incomplete for this period.

<sup>1</sup>Poundages reported as dressed weights were converted to rough (round) weights by multiplying X 2.

<sup>2</sup>Includes the southern channel catfish, white catfish, speckled bullhead, and yellow bullhead.

<sup>3</sup>Based on an estimated average wholesale price of \$0.17 per pound rough weight.

# Accounting

#### By JOEL McKINNON

The Fiscal Department of the Game and Fresh Water Fish Commission has the responsibility of keeping records of all receipts and disbursements of the entire Commission. With the increase and expansion of the Commission our work has increased tremendously.

During the biennium which is covered in the report our total disbursements are \$2,892,894.34, whereas, in the past biennium the total disbursements were \$2,636,645.21, showing an increase in disbursements of over \$256,249.13.

This increase may be reflected in the fact that during our past biennium we purchased a total of 159 automobiles at a total cost of over \$204,000. We felt that in doing this it would enable us to increase efficiency in the field work. In purchasing these automobiles we accepted bids and found the over-all average cost per vehicle was around \$1,250. In determining this average we took into consideration the purchase of two pick-up trucks with 4-wheel drive; one 1-ton panel truck and eleven jeeps. The cost of these vehicles exceeded the \$1,250.00 average, which shows that cars purchased during this period were bought at a very reasonable price. We also found that in purchasing the new automobiles we naturally had a decrease in repairs to equipment in 1951-52 over 1950-51 of approximately \$25,000. The vehicles used by personnel during 1950-51 were old cars; some were 1946 and 1947 models. We also had a decrease of \$4,743 on the purchase of parts and fittings.

During the fiscal year 1950-51 we had a total payroll of \$691,000 with the average number of employees being 255, and during 1951-52 our payroll exceeded \$818,000 with the average number of employees being 286. This shows an increase of \$127,000 and an increase in personnel of 31. During 1951-52 period the Commission set up a salary scale whereby each person doing the same type work would receive equal compensation. A yearly increase in salary of 2 percent per year for each year's service up to 11 years was also instituted at this time. At the end of 11 years' service, maximum salary would be reached.

During 1951-52 the Division system was installed and offices opened in Panama City, Williston, Lakeland, Jacksonville and Okeechobee, which necessitated the purchase of office equipment, such as typewriters, desks, chairs, etc., in order that these offices would be able to function efficiently.

During the two-year period we also purchased four Piper Cub airplanes at a cost of \$19,657.00. These airplanes are used in law enforcement work and the spraying of hyacinths on the lakes in Florida.

The Commission also purchased 17,984 acres of land during this period at a cost of \$89,923. The purchase of this land is in accordance with our program of increasing public hunting areas for the average hunter.

The Game Commission now owns the building which it occupies in Tallahassee after making the final payment of \$33,102.52 during the 1950-51 fiscal year. This has enabled the Commission to expand and progress since there was adequate space to put needed equipment and employ necessary personnel.

Along with the increase in expenditures for the past two years, we also had an increase in receipts. During the present biennium we received a total of \$2,702,-455.28 whereas in the past biennium our receipts were \$2,351,131.85, showing an increase of over \$351.000 for the biennium.

This increase is found in the sale of hunting and fishing licenses with a total collected of \$2,076,303 for this period. We collected a total of \$1,970,899.50 for the past biennium, an increase of over \$105,000. There is also shown an increase in our receipts from the Federal Government under the Pittman-Robertson program of \$36,112.

During the last session of the legislature we were authorized to sell some land and timber which was owned by the Commission. The sale of this land and timber increased our revenue \$43.816.55.

Since our last biennium we show an increase on the sale of magazine advertising of \$35,244 and an increase of \$29,866 from the sale of magazine subscriptions.

With the purchase of the new automobiles, we found after making a thorough check that the Commission would profit by selling the old automobiles to the highest bidder and buy the new cars through bids. In doing this we received over \$43,000 from the sale of old equipment.

The balance of the increase as shown on our report is reflected in the increase of Commercial licenses, along with the increase of miscellaneous receipts. The last six months of our report shows that there is a definite increase in our receipts over last year and a very successful hunting and fishing season is expected during the 1952-53 fiscal year.

#### GAME AND FRESH WATER FISH COMMISSION

#### Financial Statement—July 1, 1950 to December 31, 1952

#### Statement of Cash Receipts, Disbursements and Balances

|   | For the Fisca<br>June 3<br>1950                  | 0, 1951                              | June 3  | l Year Ended<br>30, 1952<br>- 1952        | July 1, 1952 t   | to Dec. 31, 1952                       |
|---|--|--------------------------------------|---|---|--|--|
| Item Total  | Source Total                                     |                                      | Item Total  | Source Total                              | Item Total   | Source Total                           |
| Receipts: Beginning Cash Balance July 1, 1950 License sold by County Judge License sold by State Office Revenue from other Agencies Other Revenue   | \$ 999,292.00<br>29,911.20<br>131,595.15         | \$ 249.997.92                        | Cash Balance<br>July 1, 1951<br>1,078,908.00<br>32,198.80<br>224,151.58<br>159,643.40 | \$ 110.405.75                             | Cash Balance<br>July 1, 1952<br>\$ 757,277.25<br>29,372.20<br>110,163.32<br>229,440.20 | \$ 57,112.95                           |
| Total Cash Receipts Schedule "A" Cancelled Warrants Adjustment Account Dixie County Deer Fund County Judges Account. Collier County Restocking Fund |  | \$1,207,553.50<br>54.37<br>50.00     |   | \$1,494,901.78<br>27.02<br>37.00<br>50.00 |  | \$1,126,252.97                         |
| Total Cash Receipts   |  | \$1,207,657.87                       |   | \$1,495,315.80                            |  | \$1,126,421.97                         |
| Total Available   |  | \$1,457,655.79                       |   | \$1,605,721.55                            |  | \$1,183,534.92                         |
| Disbursements: Salaries and Wages Professional Fees and Consulting Services   | \$ 691,010.79<br>1,537.25                        |                                      | \$ 818.450.80<br>1,326.50   |   | \$ 514.040.14<br>170.00  |  |
| Repairs to Equipment Printing and Binding Travel Employees  | 56,511.40<br>60,190.57<br>84,039.17              |                                      | 30,841.72<br>63,800.72<br>79,900.44   |   | 19,758.07<br>51,946.81<br>43,841.03  | ************************************** |
| Other Contractural Services Parts and Fittings Gas, Oil and Lubrication Automotive Equipment  | 10,076.30<br>27,107.11<br>98,013.31<br>53,114.99 |                                      | 38,150.44<br>22,363.35<br>109,570.82<br>165,593.84                                    |   | 12,328.30<br>13,485.81<br>60,123.08<br>104,001.22                                      |  |
| Other Equipment<br>Other Expenses (Materials,<br>Supplies, etc.)  | 27,408.72  |                                      | 32,557.59<br>185,906.88   |   | 16,001.00<br>129,714.55  | *****                                  |
| Total Expenditures Schedule "B" County Judges Account Adjustment Account  |  | \$1.344,431.25<br>2,713.79<br>105.00 |   | \$1,548,463.10<br>145.50                  |  | \$ 965,410.01<br>178.76                |
| Total Disbursements   |  | \$1,347,250.04                       |   | \$1,548,608.60                            |  | \$ 965,588.77                          |
| Ending Cash Balance June 30, 1951   |  | \$ 110,405.75                        | June 30, 1952   | \$ 57,112.95                              | Dec. 31, 1952  | \$ 217,946.15                          |
| Less \$52.50 received in June for 1952-<br>1953 License and recorded on '51-<br>'52 Report  |  |                                      |   |   |  | 52.50*                                 |

<sup>\* \$52.50</sup> cr. received from Treasurer's Office in June, 1952, thus making total Cash Receipts of 1952-53 year more in the above amounts.

Cash Balance as of Dec. 31, 1952 \$ 217,893.65

|   | 950 — June<br>1950 - 1951  | 30, 1951                                | July 1, 1951 —<br>1951 - |                | July 1, 1952  | to Dec. 31, 195                         |
|---|--|---|--------------------------|----------------|---------------|---|
| SCHEDULE "A"                                  | tem Total  | Source Total                            | Item Total               | Source Total   | Item Total    | Source Tota                             |
| Receipts by Source— Sale of Sporting License: |  |   |                          |                |               |   |
| Fishing                                       | 612,385.50   |   | \$ 666,004.25            |                | \$ 417,536.00 |   |
| Hunting                                       | 385,881.50   |   | 412,031.75               |                | 339,608.25    |   |
| Trapping                                      | 1,025.00   |   | 872.00                   |                | 133.00        |   |
| Alien Hunting                                 | 50.00  |   | 50.00                    |                |               |   |
| U. S. Permits                                 | 18,816.00  |   | 400.00                   |                | 300.00        |   |
| Gulf Hammock Permits                          | 3,400.00   |   |                          |                |               |   |
| Avon Park Permits                             | 310.00   |   |                          |                |               |   |
| Charlotte County Permits                      | 1.580.65   |   |                          |                |               |   |
| Sale of State Game Stamps                     | 1,000.00   |   | 48,550.00                |                | 31,795.00     |   |
| Sale of Archery Permits                       |  |   |                          |                | 590.00        |   |
| bate of Menery 1 crimio                       |  |   |                          |                | 050.00        | *************************************** |
| Total Sporting License                        |  | \$1,023,448.65                          |                          | \$1,130,086.70 |               | \$ 789,962.25                           |
| Sale of Commercial License:                   |  |   |                          |                |               |   |
| Retail Fish Dealer \$                         | 12,855.00  |   | \$ 13,735.00             |                | \$ 11,530.00  |   |
| Non-Resident Retail Fish Dealer               | 350.00   |   | 100.00                   |                | 50.00         |   |
| Wholesale Fish Dealer                         | 1.950.00   |   | 2,200.00                 |                | 3,300.00      |   |
| Non-Res. Wholesale Fish Dealer                | 1,000.00   |   | 1,500.00                 |                | 1,000.00      |   |
| Non-Res. Commercial Boat                      | 10.00  |   | 10.00                    |                | 10.00         |   |
| Commercial Boat                               | 2.005.70   |   | 2,114.30                 |                | 1,669.20      |   |
|   | 77075111   |   | 11,144.50                |                | 10,808.00     |   |
| Boat for Hire                                 | 11,285.50  |   |                          |                |               |   |
| Guide   | 370.00   |   | 330.00                   |                | 320.00        |   |
| Game Farm                                     | 375.00   |   | 575.00                   |                | 375.00        |   |
| Wholesale Fur Dealer and Agents               | 590.00   |   | 360.00                   |                | 250.00        |   |
| Local Fur Dealer                              | 70.00  |   | 80.00                    |                | 60.00         |   |
| Total Commercial License                      |  | \$ 29,861.20                            |                          | \$ 32,148.80   |               | \$ 29,372.20                            |
| Other Sources:                                |  |   |                          |                |               |   |
| Court Costs Collected\$                       | 11,325.81  |   | \$ 14,380.35             |                | \$ 8,604.05   |   |
| Miscellaneous                                 | 7,274.04   |   | 6,417.11                 |                | 234.20        |   |
| Prev. Year's License Collected                | 3,446.75   |   | 3,166.75                 |                | 30,586.75     |   |
| Sale of Magazine Advertising                  | 8,618.30   |   | 26,625.76                |                | 13,531.79     |   |
| Sale of Magazine Subscription                 | 21.095.75  |   | 21,356.20                |                | 21,826.06     |   |
| Sale of Magazine Single Copies                | 119.81   | *************************************** | 1,141.22                 |                | 752.21        |   |
| Sale of Miscellaneous Literature              | 113.01   |   |                          |                | 8.75          | *************************************** |
| Sale of Old Equipment                         | 826.50   |   | 42,451.54                |                | 38,427.79     |   |
| Sale of Confiscated Equipment                 | 75.00  |   | 360.00                   |                | 785.66        |   |
|   | 5.066.18   |   | 2,391.26                 |                | 67.76         |   |
| Sale of Rough Fish                            |  |   | 17,848.55                |                | 555.29        |   |
| Sale of Timber                                |  |   | 158,642.53               |                | 45,015.53     |   |
| Pittman-Robertson                             | 96,162.69<br>169.00  |   | 5,491.50                 |                | 6,162.50      |   |
| Charlotte County Grazing Lease                | 169.00   |   |                          |                | 23,858.74     |   |
| Dingell-Johnson                               |  |   | 25,968.00                |                | 20,000.11     |   |
| Sale of Land                                  |  | - 1- 1939494)4 1                        |                          |                |               |   |
| Voluntary Adv. Receipts                       |  |   | 743.00                   |                |               |   |
| Refunds                                       | 63.82  |   | 295.38                   |                | 116 460 64    |   |
| Supervision and Inspection Fee                |  |   | 5,278.63                 |                | 116,469.64    |   |
| Sale of Radio Programs                        |  |   | 94.05                    |                | 21.30         |   |
| Sale of Turkey Eggs                           |  |   | 13.00                    |                | 10.50         |   |
| Sale of Turkey and Quail                      | in the state of th |   |                          |                | 10.50         | Hill hyranama                           |
| Total Other Services                          |  | \$ 154,243.65                           |                          | \$ 332,666.28  |               | \$ 306,918.52                           |
|   |  |   |                          |                |               | _                                       |

#### GAME AND FRESH WATER FISH COMMISSION FINANCIAL STATEMENT

July 1, 1950 — June 30, 1951 July 1, 1951 — June 30, 1952 July 1, 1952 to Dec. 31, 1952

|   | 0 - 1951      | 1951 - 1952                             |   |
|---|---------------|---|---|
| ursements:  | Total         | Total                                   | Item                                    |
|   | Per Item      | Per Item                                | Total                                   |
| Salaries  | \$ 691,010.79 | \$ 818,450.80                           | \$ 514,040.1                            |
| Professional Fees and Services  | 1,537.25      | 1,326.50                                | 170.0                                   |
| Repairs to Equipment  | 56,511.40     | 30.841.72                               | 19,758.0                                |
| Other Fixed Asset Repairs   |               | 200.00                                  | 10,100.0                                |
| Printing and Binding  |               | 63,800.73                               | 51.946.8                                |
| Publication of Notices  |               | 1,009.75                                | 463.0                                   |
| Photographing and Blue Printing   |               | 5,897.18                                | 5,043.3                                 |
| Heat, Gas and Lights  | 1,779.67      | 2,279.04                                | 2,399.2                                 |
| Postage   |               |   | 4,043.3                                 |
| Telephone and Telegraph   |               | 10,885.52                               | 9,010.0                                 |
|   |               | 13,659.33                               | 2.113.                                  |
| Freight and Express   |               | 2,610.00                                |   |
| Travel—Employees  | 04,039.11     | 79,900.44                               | 43,841.<br>828.                         |
|   |               | 1,752.48                                |   |
| Subsistence, Care and Support of Persons  |               | 72.00                                   | 110                                     |
| Storage   |               | 219.05                                  | 119.                                    |
| Cleaning, Painting and Waste Removal  |               | 677.90                                  | 156.                                    |
| Laundry Service   | 292.16        | 99.13                                   | 12.                                     |
| Information and Credit Service Other Contractural Service Parts and Fittings  | 462.60        | 853.70                                  | 551.                                    |
| Other Contractural Service  | 10,076.30     | 38,150.44                               | 12,308.                                 |
| Parts and Fittings  | 27,107.11     | 22,363.35                               | 13,485.                                 |
| Masonry and Road Materials  | 45.85         | 284.86                                  | 9.                                      |
| Lumber and Wood Products  | 3,189.54      | 2,543.02                                | 1,603.                                  |
| Structural Metals   |               | 17.66                                   | 6.                                      |
| Masonry and Road Materials Lumber and Wood Products Structural Metals Other Building Materials Fibre and Textile Products | 3,643.38      | 2.491.03                                | 1,650.                                  |
|   |               | 2,294.47                                | 195.                                    |
| Other Materials Stationery and Office Supplies  | 384.75        | 34.65                                   | 2.                                      |
| Stationery and Office Supplies  | 7,105.52      | 7,993.82                                | 3.015.                                  |
| Chemicals and Laboratory Supplies   | 1,092.05      | 2,652.14                                | 542.                                    |
| Medical, Surgical and Dental Supplies   |               | 54.00                                   | 32.                                     |
| Gasoline, Oil and Lubricants  | 98,013.31     | 109,570.82                              | 60,123.                                 |
| Fuel  | 176.08        |   | 126.                                    |
| Agriculture, Horticulture and Park Supp.  | 7.246.41      | 19.81                                   | 3,790.                                  |
| Forage, Stable and Animal Supplies  | 7,767,77      | 9,370.83                                | 7.498.                                  |
|   |               | 8,622.71                                |   |
| Hand Tools and Minor Equipment  | 2,861.36      | 3,637.98                                | 1,915.                                  |
| Building and Mechanical Supplies  | 186.06        | 82.77                                   | 130.                                    |
| Clothing  | 14,064.35     | 591.36                                  | 410                                     |
| Cleaning and Laundry Supplies   |               | 489.53                                  | 412                                     |
| Food Products   |               | 3,591.27                                | 2,657                                   |
| Educational Supplies  | 136.92        | *************************************** | 2.                                      |
| Household Supplies  | 607.26        | 452.76                                  | 235.                                    |
| Other Supplies  | 5,952.36      | 12,494.62                               | 4,283                                   |
| Rental Buildings, Offices and Land  | 3,421.56      | 3,513.50                                | 2,968.                                  |
| Rental of Equipment   | 887.51        | 1.349.68                                | 37.                                     |
| Other Rentals   |               | 115.72                                  | 47.                                     |
| Insurance—Building and Equipment  | 14,450.15     | 14,598.30                               | 26,075.                                 |
|   |               |   |   |
| Insurance—Liability, Workmen's Comp   |               | 19,186.29                               | 19,528                                  |
| Official Bonds  |               | 1,324.38                                | *************************************** |
| Awards, Gratuities, etc.  |               | 705.40                                  |   |
| Registrations, Dues, etc.   |               | 1,589.65                                | 1,160                                   |
| Information and Evidence of Law Violators   |               | 42.00                                   | ************                            |
| Taxes and Assessments   |               | 146.53                                  | *************************************** |
| Household and Laundry Equipment   | 225.00        | 57.95                                   | 813.                                    |
| Office Furniture and Equipment  | 3.123.51      | 3,425.53                                | 3,339                                   |
| Engineering and Scientific Equipment  |               | 12.78                                   | 351.                                    |
| Heat, Light and Mechanical Equipment  |               | 141.17                                  | 3,970                                   |
| Automotive Equipment  |               | 165,593.84                              | 104,001                                 |
| Educational Equipment   |               | 908.94                                  |   |
| Books   |               | 7.74                                    | 4.                                      |
| Livestock not for Slaughter   | 7,650.50      | 1,970.61                                | *************************************** |
|   |               |   | 325.                                    |
| Agriculture, Horti. and Park Equipment  |               | 22 557 50                               | 16,001.                                 |
| Other Equipment   | 27,408.72     | 32,557.59                               |   |
| Building and Fixed Equipment  |               | 20,000,05                               | 2 204                                   |
| Lands   |               | 38,900.95                               | 2,394                                   |
|   |               |   | 15,846.                                 |
| Refunds to Federal Government   |               | ******************************          |   |
|   |               | 15.00                                   |   |

| SCHEDULE "B" - Disbursements                                     |   | 1950 - 1951                             |     |                  | 1951 - 1952                             | J  | my to Dec                             | ember 1952                              |
|--|---|---|-----|------------------|---|----|---------------------------------------|---|
| by Departments   | Budget<br>Total                         | Department<br>Total                     |     | Budget           | Department                              |    | Budget<br>Total                       | Department                              |
| Administration:  |   | 20002                                   |     | 20001            | 2000                                    |    | 2000                                  |   |
| Salaries   |   | \$                                      | \$  | 31,746.23        | \$                                      | \$ | 26,165.49                             | \$                                      |
| Expenses   | 90,705.13                               | 117,555.54                              |     | 57,030.78        | 88,777.01                               |    | 44,596.75                             | 70,762.24                               |
| Fiscal:  |   |   |     |                  |   |    |                                       |   |
| Salaries   |   | 44 540 55                               |     | 13,419.38        | *************************************** |    | 8,622.60                              | 0.000.00                                |
| Expenses Law Enforcement:  | 776.05                                  | 14,548.55                               |     | 479.60           | 13,898.98                               |    | 1,001.26                              | 9,623.86                                |
| Salaries   | 468.338.91                              |   |     | 515.587.63       |   |    |                                       |   |
| Expenses   |   | 759,392.83                              |     | 373,806.65       | 889,394.28                              |    |                                       | *************************************** |
| Communications:  | 201,000.02                              | 100,002.00                              |     | 313,000.03       | 003,334.20                              | ,  |                                       | *************************************** |
| Salaries   | 7.180.07                                |   |     | 10,298.50        |   |    | 8,503.96                              |   |
| Expenses   |   | 19.248.94                               |     | 14,386.63        | 24,685.13                               |    | 14,785.07                             | 23,289.03                               |
| School:  | ,                                       | 10,010.01                               |     | 2 2,000.00       | 21,000.10                               |    | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |   |
| Salaries   | 2,634.97                                | *************************************** |     | 7,123.60         |   |    |                                       |   |
| Expenses   | 6,954.81                                | 9,589.78                                |     | 6,108.40         | 13,232.00                               |    |                                       | *************************************** |
| Fish Management:   |   |   |     |                  |   |    |                                       |   |
| Salaries   |   | **************                          |     | 72,547.08        |   |    | 2,080.00                              |   |
| Expenses   | 34,380.28                               | 95,622.09                               |     | 45,911.03        | 118,458.11                              |    | 1,719.95                              | 3,799.95                                |
| Information and Education:                                       |   |   |     |                  |   |    | 2222                                  |   |
| Salaries   |   |   |     | 19,122.63        |   |    | 8,244.45                              | 00 445 40                               |
| Expenses   | 15,018.86                               | 32,927.18                               |     | 13,607.86        | 32,730.49                               |    | 24,200.98                             | 32,445.43                               |
| Magazines:   | 15 414 00                               |   |     | 00 000 00        |   |    | 17 501 07                             |   |
| Salaries   | 15,414.00                               | TO 40 T 05                              |     | 22,320.66        | 05.000.00                               |    | 17,501.37                             | 05 000 00                               |
| Expenses   | 57,023.95                               | 72,437.95                               |     | 65,184.52        | 87,505.18                               |    | 48,462.46                             | 65,963.83                               |
| Photography:   | 0.050.00                                |   |     | 0.000.00         |   |    |                                       |   |
| Salaries   |   | E 001 EE                                |     | 3,606.00         | 7.000.00                                |    |                                       | *************************************** |
| ExpensesFairs:   | 4,971.61                                | 7,031.57                                |     | 3,627.29         | 7,233.29                                |    |                                       | *************************************** |
| Salaries   |   |   |     | 2 000 42         |   |    |                                       |   |
|  |   | 4 115 00                                |     | 3,009.42         | 0.001.42                                |    |                                       | *************************************** |
| Expenses   | 4,115.26                                | 4,115.26                                |     | 6,282.01         | 9,291.43                                |    |                                       | *************************************** |
| Game Management:   | 75 600 04                               |   |     | 110 000 07       |   |    |                                       |   |
| Salaries   | 75,609.84                               | 011 001 55                              |     | 119,669.67       | 000 057 00                              |    |                                       | *************************************** |
| Expenses   | 136,351.71                              | 211,961.55                              |     | 143,587.53       | 263,257.20                              |    |                                       | ****************                        |
| Grand Total  | *************************************** | \$1,344,431.24                          |     |                  | \$1,548,463.10                          |    | /                                     | *************************************** |
| South Florida Division:  |   |   |     |                  | *************************************** |    |                                       |   |
| Salaries   |   |   |     |                  |   |    | 58,519.29                             |   |
| Expenses   |   | ******************                      |     |                  |   |    | 46,719.24                             | 105,238.53                              |
| Northeast Florida Division:                                      | 111111111111111111111111111111111111111 |   |     |                  |   |    | 10,115.21                             | 100,200.00                              |
| Salaries   |   |   |     |                  |   |    | 59.153.11                             |   |
| Expenses   |   |   |     |                  |   |    | 42,249.16                             | 101,402.27                              |
| Northwest Florida Division:                                      |   |   |     |                  |   |    | 10,210.10                             | 202,102,21                              |
| Salaries   |   |   |     |                  |   |    | 65,335.84                             |   |
| Expenses   |   |   |     |                  |   |    | 41,858.52                             | 107,194.36                              |
| Everglades Division:   |   |   |     |                  |   |    |                                       | 200                                     |
| Salaries   |   |   |     |                  |   |    | 45,584.34                             |   |
| Expenses   |   |   |     |                  |   |    | 43,483.04                             | 89,067.38                               |
| Central Division:  |   |   |     |                  |   |    |                                       |   |
| Salaries   |   |   |     |                  | *************                           |    | 61,714.60                             |   |
| Expenses   | *************************************** | *************************************** |     |                  | *************                           |    | 34,672.07                             | 96,386.67                               |
| Dingell-Johnson:   |   |   |     |                  |   |    |                                       |   |
| Salaries   |   |   | ,   |                  |   |    | 25,416.77                             | *************************************** |
| Expenses   |   |   |     |                  | *****************                       |    | 12,778.69                             | 38,195.46                               |
| Rough Fish Control:  |   |   |     |                  |   |    | 7.226.00                              | 10000                                   |
| Expenses   | ****************                        | *************************************** |     | administrative v | *************************************** |    | 556.13                                | 556.13                                  |
| Lake Okeechobee F/M Station:                                     |   |   |     |                  |   |    |                                       |   |
| Salaries   |   | **************                          |     |                  | *************************************** |    | 20,167.28                             |   |
| Expenses   | ****************                        | ************                            |     |                  | **************                          |    | 12,255.47                             | 32,422.75                               |
| St. Johns River F/M Station:                                     |   |   |     |                  |   |    |                                       |   |
| Salaries   |   |   |     |                  | *************************************** |    | 29,517.28                             | 00.084.80                               |
| Expenses   |   | *************************************** |     |                  | ****                                    |    | 10,357.50                             | 39,874.78                               |
| Fish Squadron:   |   |   |     |                  |   |    |                                       |   |
| Salaries   | *************************************** |   |     |                  |   |    | 1,540.00                              |   |
| Expenses   | ***************                         |   |     | entition lines.  | \$159+20149 (1429 Class                 |    | 1,083.35                              | 2,623.35                                |
| Pittman-Robertson:   |   |   |     |                  |   |    | 40 000 40                             |   |
| Salaries   | *************************************** |   |     |                  |   |    | 46,038.46                             | 05 550 40                               |
| Expenses   | *************************************** | *************************************** |     | out therefolds   |   |    | 41,739.96                             | 87,778.42                               |
| National Forest Hunt:  |   |   |     |                  |   |    | E00 70                                |   |
| Salaries   |   | ***************                         |     | ***********      |   |    | 599.76                                | 17 019 99                               |
|  |   |   | 1.0 |                  |   |    | 17,313.07                             | 17,912.83                               |
| Expenses   | *****************                       |   |     |                  |   |    |                                       |   |
| Expenses<br>State Hunts:   |   |   |     |                  |   |    | 01 000 15                             |   |
| Expenses State Hunts: Salaries                                   | *****************                       |   |     | **************   |   |    | 21,683.45                             | 04 100 10                               |
| Expenses<br>State Hunts:<br>Salaries<br>Expenses                 | *****************                       |   |     | ***************  | ****************                        |    | 21,683.45<br>2,439.71                 | 24,123.16                               |
| Expenses State Hunts: Salaries Expenses Quall Hatchery:          | *************************************** |   |     | *************    | ***************                         |    | 2,439.71                              | 24,123.16                               |
| Expenses State Hunts: Salaries Expenses Quall Hatchery: Salaries | *************************************** | *************************************** |     |                  | *************************************** |    | 2,439.71<br>7,652.09                  | 24,123.16                               |
| Expenses State Hunts: Salaries Expenses Quall Hatchery:          | *************************************** |   |     | *************    | ***************                         |    | 2,439.71                              | 24,123.16                               |
| Expenses State Hunts: Salaries Expenses Quall Hatchery: Salaries |   | *************************************** |     |                  | *************************************** |    | 2,439.71<br>7,652.09                  | 24,123.16                               |

## **GAME & FISH CONSERVATION**



BENEFITS ALL THE PEOPLE